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ORIGINAL ARTICLES.

PRECEDENT CAUSES OF TUBERCULOSIS.

Read in the Section on Practice of Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY J. WELLINGTON BYERS, M.D.

CHARLOTTE, N. C.

I invite your attention to some views in regard to the condition that has been designated as the precedent or pretubercular stage of consumption. That there is such a condition capable of distinct clinical position and recognition, is very generally conceded, though as to the exact nature of its underlying phenomena there remains much yet to be determined. We are not, however, without some useful and guiding data and such as we do possess has not received the consideration that the condition would appear to warrant.

We have reached a position where we can appreciate the discoveries and bearing of the work of Koch, and we realize the fact that these have not furnished the therapeutic resources that their first announcement seemed to promise. Influenced by this fact, investigation has been compelled to turn to other paths of work. The history of the pathology of tuberculosis has been varied. Our earliest conceptions of the disease was that it was pus, a process of suppuration; second, that it was inflammatory nodules; third, that these were distinct tubercles; fourth, that these tubercles contained a virus; fifth, that this virus was inoculable; sixth, that inoculability was due to a specific bacillus. When this sixth and last stage of our knowledge was reached a strong hope possessed us that means for the prevention and cure of tuberculosis would soon be forthcoming. So far this has been a series of disappointments and we do not possess a single remedy capable of effecting anything like a cure of this disease. Baffled by repeated efforts to treat tuberculosis from its bacteriologic standpoint, research has turned to an investigation of its precedent causes, and is making an effort to detect and control those contributing factors, as the only possible means of modifying this disorder. Clinical experience has long taught that pulmonary tuberculosis to be successfully combatted must be taken in its very earliest stage and that the ratio of arrests, or cures, is invariably in proportion to the recency of the disease. The reason for this is now plain. The older theories of Virchow which showed that the disposition to tuberculosis was the same as the disposition to inflammation and that the primary foci constituting the anatomical basis for the implantation of the bacilli and the production of tuberculosis, was a previous inflammation, and now admitted as the correct ones. It has been established that tubercular changes are always secondary to inflammation and that infection of the human organism does not occur in the absence of the latter. These precedent causes, consisting of changes in the integrity of the tissues and cells, are local and general, acquired and hereditary. Before the bacilli can enter and flourish there must exist certain favorable conditions in the soil. The fact that it is not always possible to point out the precise location or seat of these vulnerable foci in no way invalidates the correctness of this statement; they must always be present. Experiment, experience and analogy all demonstrate that tuberculosis is never primary but secondary in time and pathologic importance. In the normal condition of the tissues no foci exist and the bacilli entering through the respiratory channels are removed with the expectoration or destroyed by the phagocytes. The system is in this way kept immune. If, however, the pulmonary tissue contain lesions, or foci, the effect of previous inflammatory disease, such as tracheitis, bronchitis or broncho-pneumonia, or foci such as are produced by foreign bodies incident to the occupations of stonecutters, cutlery works and the like, they constitute vulnerable points for the implantation of the bacilli, and are liable to invite tuberculosis. It is almost certain that the presence or absence of these points in the lungs constitute the real basis for the difference of susceptibility manifested at different periods. Croupous pneumonia is rarely followed by tuberculosis, though furnishing the gravest changes in the lungs. The reason for this is that the exudation in the alveoli consists largely of fibrin and leucocytes, which quickly break down and is soon reabsorbed, and the bacilli find no foci to infect. In bronchitis and catarrhal pneumonia the absorption is much slower, the products of inflammation last longer and the bacilli have the favorable conditions present for a longer time and hence we find tuberculosis a frequent result. It is reasonable to conclude that these products of inflammation must constitute the controlling factors and operate in the manner stated. Niemeyer taught that tubercular changes were always originated in previous inflammatory conditions, and while he did not clearly interpret the meaning of them, he chronicled the fact which we are now able to understand. His views were abandoned only for a time, and we are again realizing their importance and truth. So far, tubercular processes are seen to be the result of inflammatory changes. There are, however, cases of tuberculosis in which no such factors form a part of their clinical history. The disease appears in the absence of bronchitis, broncho-pneumonia, whooping-cough, measles and other diseases involving the air passages, and also results from fevers, anemia, gastric and other diseases. How can the theory of primary inflammatory foci in the pulmonary tissues be made to fit these cases? In my opinion we must assume that the organism under certain conditions of nutrition, such as follow the diseases enumerated,

manufactures or produces defective blood cells or leucocytes. These leucocytes, following the general law of physiology, are either encysted or destroyed by the organism. When from any cause the blood-forming organs produce defective cells they are treated like other extraneous or foreign substances and destroyed, encapsulated or extruded. In the diseases mentioned this is, in all probability, the case; the imperfect leucocytes are extruded into the tissues and at different localities, such as the lungs, form nodules of dying or dead cells. These nodules set up a low grade of inflammatory reaction which may continue until infected by the bacilli or cast off by expectoration or destroyed by the phagocytes. Under these conditions the foci are present and constitute the same kind of pathologic seats as those following inflammatory diseases. That this is a correct view of the infecting process in tuberculosis, can be experimentally shown by the introduction of such substances into the tissues as bits of sponge, cork or cloth and allowing them to remain for a time. After awhile they are seen to induce inflammatory reaction of a very low grade, and later on become tubercular. The natural history of the bacilli shows that they never possess the power of unconditionally attacking the organism; that they are peculiar in their methods of invasion and invariably demand precedent conditions, causes or susceptibility in order to attack. Seeing the nature of these conditions, their place in the pathologic condition involved and their connection with the etiology of this disease the question may be asked here, can they be controlled? In the beginning, when the foci are few and small, we may hope to accomplish much by proper treatment. Loss of weight and capricious appetite are the first indications of altered nutrition. We should endeavor to meet these with proper food, exercise in the open air and other well recognized means. The possibilities of cure in this stage are numerous since the organism has not the toxic phenomena as a result of the pus cocci to contend with, which appears later on. We should direct our efforts toward removing the inflammatory nodules through tissue nutrition, thereby stimulating the processes of phagocytosis, absorption or fibrosis in the affected regions. In case we do not get the desired results the administration of an arsenic preparation to promote fatty metamorphosis and the hypophosphites to remove them might offer some advantage. The patient undergoing this treatment should be placed, as far as possible, in aseptic surroundings, such as mountains, in rural localities where the chances of bacillary infection are reduced to a minimum. The important point is to prevent the simple inflammatory process from becoming complicated by specific infection when it rapidly passes beyond ordinary measures of control. In subjects presenting evidence of hereditary influences we know that the bacilli are likely to thrive and we must not wait, but treat long before hemoptysis, pain in the side, wasting signs of active symptoms have appeared. We are too much inclined to give conservative advice in these cases and find later on that we should have been active in the work of prevention.

In this paper I have attempted to point out that the control of tuberculosis lies largely in its early and preventive stages. That its precedent causes, in inflammatory foci, are the result of previous disease. That the early recognition and treatment of this condition would remove the chief cause of tuberculosis.

SOME REMARKS ON THE MANAGEMENT OF VALVULAR CARDIAC DISEASE.

Read in the Section on Practice of Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5–8, 1896.

BY GEORGE L. COLE, M.D.

LOS ANGELES, CAL.

I shall not consume the time of this society by entering into the history, etiology, etc., of valvular heart disease, but I do wish to say, by way of preface, a few words about prophylaxis. I had the pleasure of listening to the last course of lectures delivered by the late Austin Flint, in Bellevue Hospital Medical College, in the winter of 1885–6, and if there was any one fact that he endeavored to impress upon his class more than another, it was the duty of the physician, in treating articular rheumatism, to so adjust the treatment as to place the complication of valvular disease at the minimum. The question asked most frequently by him in the weekly "quiz" was, "What shall we do in acute articular rheumatism to render the patient least liable to cardiac complications?" The reply he wished was this: "Render the secretions of the body alkaline as speedily as possible, and in so doing not rely upon the salicylates alone." In other words, from the rich storehouse of knowledge garnered by over fifty years of conscientious, indefatigable and brilliant labor, came this *gem* to be handed down to posterity with emphasis, *i.e.*, that the stronger alkalies, such as sodium bicarbonate in large doses, are as essential, and even more so, early in the treatment, than the salicylates. When we remember the large percentage of valvular disease caused by articular rheumatism, it is easy to understand why this great master wished to so impress this truth upon his class that they should never forget its importance.

Regarding the management of the disease, it is to be remembered that there are other things to be taken into account than the medicinal treatment. Diet and regimen are two factors never to be neglected. The food should consist largely of nitrogenized material, taken in quantities that can be easily cared for by the stomach and digestive apparatus, and at intervals best adapted to the accomplishment of perfect assimilation. The secretions of the body are to be kept in as nearly a perfect a condition as possible. The emotions and passions are to be under the control of the patient, and he is to remember that upon such judicious control depends to no small degree the conserving of compensatory force. With regard to the question of enforced exercise as opposed to rest, I favor rest. Why there should have arisen an advocacy of mountain climbing, etc., in this condition, I am totally unable to comprehend any more than I can understand why a crippled dray horse should have his load increased instead of lightened in order to prolong his days of usefulness. Here I wish to be distinctly understood as referring to enforced exercise with the object of increasing the heart force. If by increased labor you wish to aid in elimination of urates and other poisonous material from the blood, or to reduce a flabby, obese structure in order to lessen the amount of labor required by the heart to sustain the circulation, I will agree that in a few well-selected cases there may be something to be gained, but such cases are extremely rare with us, and in the great majority of cases rest, both mental and physical, is absolutely necessary to the best interest of the patient.

In some cases of beginning loss of compensatory

force, prolonged rest in bed, by lessening the amount of work required of the heart, will restore compensation without any medicinal treatment. In all cases when possible, at such times, complete rest in the recumbent position for a time will do much to facilitate restoration.

With regard to the medicinal treatment, let me first say a few words about the most commonly used drug, digitalis. That many cases of valvular disease are treated with digitalis when it would be far better to use *no* remedy, is a truth which we should all bear in mind. The one great question in giving cardiac tonics is, "Has compensatory hypertrophy failed to make the power of the lame heart equal to the amount of work to be accomplished by it?" No matter how loud the murmur, no matter where the apex may be, no matter how large the superficial cardiac space; so long as hypertrophy is compensating for the valvular leakage or stenosis, so long should we religiously let cardiac tonics alone. But sooner or later there comes a time when hypertrophy ceases to compensate; there may be dyspnea, pulmonary congestion or edema, edema of the extremities, portal congestion, one or all, in greater or less degree, and here we have coming to our aid something in the way of heart tonics that will for a time urge on the flagging heart to continue what it has previously been doing by means of increased strength derived from increase of muscular fiber. It matters little which valve is affected, the therapeutic indications are practically same for each and all. It also matters little what form of digitalis is given, provided it be reliable. The difference in dose has more practical importance than the form in which it is given. There are now and then cases where the heart is acting tumultuously in the later stages of dilatation, the kidneys not secreting urine and the patient to all appearances approaching death, in which two, three or four large doses of digitalis, *i.e.*, an equivalent to one-half dram of the tincture, may work a transformation, after which smaller doses may be continued, always bearing in mind that while at first the drug stimulates secretion of urine, if long continued, and especially in large doses, the opposite effect may be produced. I know of no other drug that will take the place of this. Strophanthus, spartein, strychnin, etc., may be substituted, when we find it necessary to leave off the digitalis for a time, and indeed may be used as adjuvants often with great advantage.

Next to digitalis in importance in these cases of valvular disease where hypertrophy has ceased to compensate, I would place calomel, or some other form of mercury. Doubtless all the good derived from this class of drugs comes mainly from its action upon the portal system. Nearly every case of valvular disease of long standing is accompanied by a congested liver and portal system. A mercurial purge followed by the continued use of small doses of calomel, or smaller doses of corrosive sublimate, tend better than any other remedy to relieve this condition. By exercising care and judgment, this can be done in such a manner as to better the digestive apparatus rather than to impair it. Indeed, the change wrought by mercurials has sometimes been so marvelous that we have wondered if some other explanation than this action upon the portal system ought not to be offered to account for the good done. However, when we remember that this venous stasis is the forerunner of edema and ascites in all cases; that edema can not well occur until the venous system has been obstructed at this point, we readily understand how we should expect to accomplish the great good we do by it. In those cases where we have a history of specific disease, there may possibly enter another element to account for the transformation that sometimes follows the persistent use of mercury. While I have seen mercurials used extensively for a long period of time in this disease, I have yet to see a case in which salivation, or any other unpleasant symptom, resulted from it, unless it be nausea and vomiting temporarily.

In nitro-glycerin we have a remedy that, instead of increasing the heart power as does digitalis and strophanthus, lessens the arterial tension by dilating the peripheral arterioles. Hence it is often of the greatest advantage in a crisis where by it we can take the load off the over-burdened heart, and allow it, temporarily at least, to gain its equilibrium. It acts much in the same manner that venesection does in a crisis, but with the additional advantage that the blood is not sacrificed, but remains where it can be restored to the system when the critical time has passed. It is to be remembered that to be of any great advantage, *often repeated small doses* are to be administered, and that its use is to be discontinued when its physiologic effect is shown by persistent headache.

I wish briefly to speak of another drug which I believe has not received the attention it deserves. During the last three years quite a number of chronic valvular cases in the later stages have fallen into my hands, upon which digitalis, strophanthus, nitro-glycerin and, in fact, the whole line of ordinary heart tonics, had been used until apparently all the good to be derived from them had been exhausted, and death seemed imminent. In these cases I have found *diuretin* to act beneficially. How it acts I do not know. It certainly stimulates the kidneys to better secretion, and in doing this acts better in cases where albuminuria *does not* exist. In other words, my own experience with this remedy demonstrates that the diuretic action is more marked in valvular disease of the heart than in Bright's disease of the kidneys. And in this I am not alone, as some others find the same result. In these cases that I have just mentioned as recently coming under my care, the use of diuretin in doses varying from one-half to two drams daily in divided doses, in combination with mercurials, has worked as much of a transformation as we often see by the combination of digitalis and mercurials at a much earlier stage in the disease.

THE VALUE OF THE PULMONIC SECOND SOUND.

Read in the Section on Practice of Medicine at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5–8, 1896.

BY J. N. HALL, M.D.

PROFESSOR OF THERAPEUTICS AND CLINICAL MEDICINE, UNIVERSITY OF COLORADO, DENVER, COLO.

My object in presenting this paper is to call attention to a well-known but much neglected subject, the investigation, in diseases of the chest especially, of the character of the second sound at the orifice of the pulmonary artery. It appears to me that many physicians, although gauging quite accurately the tension in the systemic circulation, by means of the pulse and the character of the aortic second sound, pass over as almost unworthy of notice the examination of the pulmonic area. And yet, in a few seconds, with the

stethoscope as much may be learned of the conditions of the circulation in the lungs as has been learned, at the aortic area, of the systemic circulation.

In diseases of the mitral valve, whether obstructive or regurgitant, all authorities agree as to the importance of the accentuation of the pulmonic second sound, in deciding as to the degree of obstruction in the pulmonary vessels. One may probably, with safety, go even further than most authors go, in the case of an apical systolic murmur, which has existed for some time, and say, given such a murmur, not transmitted greatly to the left, without enlargement of the cardiac area, and without accentuation of the pulmonic second sound, that probably no serious change has taken place in the valve. In other words, it is a crucial test when one is in doubt as to the character of an apical systolic murmur, and, I believe, not appreciated at its full value.

This sound is equally available in case of a mitral obstructive lesion in forming a correct judgment as to the degree of obstruction, and the degree of compensation as well. In case of doubt as to whether a presystolic murmur at the apex were due to mitral obstruction or to aortic regurgitation (Flint's murmur), the absence of marked accentuation of the pulmonic second sound would weigh decidedly in favor of the integrity of the mitral valve, although I have not found this point mentioned in any of the treatises upon this subject.

In chronic disease of the chest of whatever nature, a marked accentuation of the second sound at the pulmonic orifice is of grave prognostic import, indicating a decided obstruction to the circulation in the vessels involved, although indicating as well an hypertrophy of the right ventricle to meet the increased demand. Whether the obstruction be from the destruction of capillaries in emphysema, the contraction of the interstitial tissue in fibroid phthisis, or the combination of destruction of tissue, infiltration of the new products and possibly other processes in ordinary tuberculosis, it indicates serious trouble.

A knowledge of the value of this sign may at times save one from serious error, as in the following case, seen in consultation some years since: A girl, six years of age, had presented for five days all the rational signs of acute lobar pneumonia, but the attending physician had been unable, after repeated examinations, to locate the disease. Finally, fearing that some other trouble was setting in, he asked me to see the case with him.

After hearing the history I confidently expected to find the signs of pneumonia in the left chest, and was surprised to find the fronts entirely normal, so far as I could determine. Because of the child's weakness, it was proposed to me that the examination of the back be omitted, but, having noted a decided accentuation of the pulmonic second sound, and called the attending physician's attention to it, I insisted upon the complete examination, confident that anything of sufficient gravity to cause a decided increase in the tension in the pulmonic artery, must be discoverable upon careful examination. The back was found normal, however, with the exception of an area two inches in diameter near the lower angle of the left scapula; here very moderate dulness existed, but the auscultatory signs were marked, namely, bronchial respiration, bronchophony and moist râles. It was evidently an acute pneumonia which approached the surface of the lung only at this point, and, to one not fairly expert in physical diagnosis, not easy to discover. I admit, of course, that no physician should overlook such signs, but they *were* overlooked by the attendant in this case, and by a previous consultant. If the two had appreciated the meaning of the decided accentuation of the sound in question, they would probably have been led to make a successful search for the cause of it.

Other instances of somewhat similar nature might be quoted, but this one will suffice for illustration.

I believe that most of the present generation of physicians in active practice were taught that the murmurs at the pulmonic orifice were not only rare, but of comparatively little importance. The effect of this teaching has been to lead many of us to entirely neglect all sounds at this orifice in ordinary examinations, for I have often seen its area passed by without so much as the touch of the stethoscope. Inasmuch as a proper idea of the amount of obstruction in the pulmonic circuit in pneumonia, and hence of the amount of work called for from the right ventricle—a most important factor in prognosis and in deciding upon the advisability of administering cardiac stimulants—can not be obtained without an examination of the sound in question; nor a correct judgment be formed, in a case of chronic bronchitis, as to whether there is beginning obstruction, and consequent hypertrophy of the right heart, from emphysema which has not yet developed sufficiently to be patent to percussion, it would seem to be proven, when the evidence we have heretofore adduced is considered, that this sound should be investigated in every day practice exactly as other accessible chest sounds are, the ease with which such examination can be made being a powerful recommendation of the procedure.

THE CARE OF CARDIAC DISEASE DURING THE QUIESCENT PERIOD.

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BY LOUIS FAUGERES BISHOP, A.M., M.D.

NEW YORK.

The term "care of disease" is a very pleasing one as representing one of the most honorable offices of the physician. The old Homeric definition of the physician as the one who cured internal diseases and took care of that which he could not cure, always seemed very happy especially when coupled with the definition of the surgeon as the one who cured external diseases. It is a very practical question, indeed, how we shall manage cases of organic cardiac disease so that the patient may enjoy a prolonged and comfortable existence.

A great change of public and professional opinion as to the grave prognosis, which was formerly given in valvular disease, has occurred during the present century. The old feeling was that a person with chronic heart disease was certain to die in a moderate length of time and was in constant danger of sudden death. The more careful physical examination of modern times has modified this view to a great extent, but credit must also be given to the better care of such cases. Sudden death is uncommon except in aortic insufficiency, and in cases complicated by true angina pectoris. It may be that sudden death was more common at a period in medical history when the use of digitalis was habitually abused.

Time will not allow even the consideration of pathology in a most cursory way.

We are apt to think of chronic cardiac disease as confined too strictly to the valves. This contrary to analogy of the same class of lesions in other parts of the body. When a joint becomes the seat of chronic arthritis, the connective tissue of the remainder of the limb is frequently also involved, and the muscles are often the seat of pain.

The care of cardiac disease during the quiescent period is the care of the myocardium; for the endocardium we can do but little.

The causes of hypertrophy and dilatation are important to be understood. We refer to hypertrophy which goes beyond that degree which is desirable in a heart with damaged valves. Excessive hypertrophy is best avoided by a regular hygienic life and by systematically watching for any cause which might increase the burden of the circulation, and removing it by treating the cause, or if that is not possible by the systematic use of arterial dilators.

Dilatation is that condition which the heart reaches when struggling under the burden of a circulation it can no longer maintain on account of the weakened myocardium. Instead of a firm contraction almost emptying the heart at each stroke, the systoles only partially expel the blood, and symptoms of impaired circulation are immediately evident. Dilatation is usually gradually established, occurring at intervals, for a time from a sufficient cause, and then perhaps disappearing. However, cases of acute dilatation, even in those previously unaffected by cardiac disease, are not at all uncommon. This gradual onset of dilatation is commonly brought about by overwork, anxiety, long continued excitement, intercurrent disease, or some other cause of increased cardiac strain. The study of the pulse as indicating various plans of management in the course of a cardiac case during the quiescent period is not as easy as one might suppose. If we are familiar with the case, and familiar with the personality of the particular pulse, it is easy enough to detect danger in some marked change. We have all of us seen cases of valvular disease in which a good degree of health and functional activity was carried on for a long period of time, and yet a person examining the pulse, who was not familiar with its habitual irregularity, intermittance, or permanent extreme feebleness, would give a prognosis of immediate calamity. The mere objective weakness of the heart's action apart from the signs of passive congestion should not lead to too bad a prognosis.

The question of exercise is important and interesting. Judicious exercise may bring about compensation, and prolong the period of its existence, and the deference of that time when the cardiac lesion will overbalance the power of the myocardium.

Taking our patient at the time when a valvular lesion has been the result of endocarditis or atheroma and the heart muscle has assumed successfully its additional burden the question arises in the mind of the physician, or perhaps is put by the patient, what forms of exercise shall be taken from a sense of duty, or may be indulged in for pleasure. To this question a categorical answer is not possible. We have to consider the occupation of the patient, his surroundings and his habits. Often enough his daily occupation and life will be found well suited to his condition. Such would be the case of a man whose business required a superintendence of out-door work or the work of a factory, that is, work devoid of sudden demands of strength, and devoid of mental excitement. The other two classes are those who do not get sufficient exercise, and those who are called upon for a dangerous amount of physical exertion. Curiously enough the former often suffer as much as the latter. The patient who leads a sedentary indolent life develops very soon the lung effects of passive congestion. The blood stasis, due to the poor heart performance, is augmented by the physical stagnation which follows insufficient exercise. Thus we see early developed in these patients chronic gastritis, constipation and the train of symptoms best described as biliousness. They take cold easily and there is quickly established a chronic catarrhal tendency in the respiratory passages. For these patients systematic out-door exercise in spite of their permanent cardiac lesion is of enormous advantage. The form of exercise must be such as will be of interest to the patient, otherwise persons of this disposition will never persist in carrying it out. The introduction of the game of golf would seem to afford an unusual opportunity for just such cases. It requires movement from place to place in the open air, pleasant surroundings, and is devoid of dangerous excitement and exertion. In certain cases bicycling on level roads in quiet districts is to be recommended, but such persons must be trusted not to enter into speeding contests. Driving, walking and calisthenics with light apparatus are also suitable. The patient should be instructed as to the principles involved, that is, that the exercise should be carried on slowly, systematically and never to the point of producing dyspnea, and never under any circumstances must competitions of strength or speed be entered into. The third class of patients who carry exercise too far are often difficult to manage because frequently enough their occupation is the only source of livelihood, and can not be readily abandoned or changed. Fortunately these patients frequently develop an unexpected degree of compensation, and provided the labor is regular they may continue for many years without the final reckoning. Still the average life of such individuals is very much shortened. If possible, these patients must be trained to do their work in a deliberate manner, avoiding sudden strains, and as much as possible they must be watched carefully for the signs of failing compensation. In some instances, when no other resource seems to be available, they must be tided over at times by the use of digitalis. Provided the work is systematic, even though severe, it is extraordinary how well some of these patients get along. We have all of us seen men with nearly all the murmurs in the whole circle of valvular lesions, who carry on occupations some of us could not endure for a single day; but all of us have likewise seen the day of reckoning when these men of powerful muscular development and splendid physique, except for their cardiac lesion, have come to a state where they can hardly lift a finger without gasping for breath. So in maintaining compensation, judicious exercise is one of the most important factors.

In connection with exercise massage should be mentioned. It has been happily defined as a process in which the operator takes the exercise and the patient receives the benefit. The use of hydrotherapy to improve the general nutrition and circulation is something worthy of attention.

It is a pity that in this country, at least, it is so

difficult to obtain a proper carrying out of these measures. The advocates of hydrotherapy have so exaggerated its therapeutic value, great as it may be, that one often hesitates to subject his patients to their care. It is hoped that the time will come when properly trained persons will be available at a moderate cost to carry out hydrotherapeutic measures and not exceed the limits of their sphere. A drawback of hydrotherapy is that when carried out as it should be it will take a great deal of time. Much of the benefit is lost if a patient can not rest after bathing. The effect of a warm bath upon congested organs accompanied by gentle rubbing and followed by a period of rest in a recumbent position can not but be beneficial when carried out under proper precautions. The importance of the care of the skin aside from any special system in chronic cardiac disease is very great. The the theory that dirt obstructs the pores, however pleasant to believe, is probably not true. The value of bathing as far as health is concerned is more indirect in its effect. It improves the nutrition of the skin and stimulates its action and the tone of the general circulation.

As to clothing, the whole surface of the body except the hands and face should be always enveloped by flannel, and in severe weather this should be very much heavier than is thought necessary for healthy people.

One of the first considerations when we come in contact with such a case, is the advisability of telling the patient of the existence of the condition. To my mind in the great majority of cases this is best. It requires a good deal of patience to supply the patient with a sufficient amount of knowledge to make the explanation comprehensive and free from terror. The first point is to disabuse the patient of the popular superstition that organic heart disease is a common source of sudden death. The tendency of the day to speak of death as "heart failure" exaggerates the difficulty at the present time. It may truly be said of a case of valvular disease of the heart that sudden death is not at all probable, and it might be added that it would be preferable to the long-drawn-out death by the gradual involvement of the organs from passive congestion, dyspnea and the supervention of dropsy. It is important that the patients should know that they have a damaged heart, because their coöperation is absolutely necessary in carrying out the proper regimen. The use of drugs in these cases directly stimulating the heart's action is seldom necessary. If the heart is unable to do its work by the physiologic increase of activity with the hypertrophy that naturally takes place, it is far better by absolute rest of the patient to give the heart a chance to catch up by its natural force than to whip it up to its work by drugs. Sometimes there will be cases when circumstances do not allow a cessation of the routine work of the patient. In these cases digitalis will often remove the symptoms of the heart's deficiency. When we have the coöperation of the patient a plan of existence must be laid out as free as possible from overwork, worry, over-exertion, and dissipation.

Physical labor, if not such as causes sudden strains upon the heart's action, need not be interdicted; but all causes leading to undue excitement, or such as tend to a neurasthenic condition, must be especially avoided. A person with organic cardiac disease can often perform very hard mental or even physical labor, provided it is unaccompanied by excitement or worry. These cases do better in the country than in the city. Routine existence is more naturally attained and the purer air and quieter surroundings conduce to the even plane of existence which we are seeking.

Whatever plan of life is made, the great point is regularity. This is none the less true in the average case because now and again instances come under our notice of persons with badly damaged hearts, who lead lives of activity and excitement and accomplish a prodigious amount of labor, and still survive. These patients live longer than might be expected, but nearly all of them pay the penalty by a period of collapse and suffering. These cases of severe valvular disease, who do not submit to a proper regimen, nearly always succumb in the end, however long deferred, to the disease itself, while the others may, as far as the heart is concerned, maintain an even plane of health, and die after a very long time only from some other disease.

In the drug treatment of these chronic cases the use of iron is of great value. The tendency to anemia which exists in all chronic diseases has in this instance a very direct tendency to exaggerate the symptoms. Sometimes dyspnea is entirely relieved when the impoverished blood is brought up more nearly to par. The alimentary system must receive very careful attention. The tendency of passive congestion to produce damage is very much increased by any functional derangement. Constipation is a very great evil in these cases, and regularity of this function should be absolutely insisted upon. The means must be chosen according to the merits of each case.

Against the use of digitalis and drugs of this class in the stage of compensation we would enter a strong protest. The routine practice is now happily rare of giving digitalis on account of the presence of a murmur without regard to other necessities. Strophanthus has proved in our hands a very valuable drug in tiding over periods of failure of compensation. For long use it has not been so satisfactory as digitalis.

The use of drugs during the quiescent period must to a large extent be the drugs which we are pleased to call "hygienic" drugs, namely tonics, laxatives, and occasionally alteratives. Strychnin is at times indicated in nearly all of these cases. It stimulates the nervous system in every part of the body, and in that way affects favorably the functions of nutrition, motion and secretion. Digitalis may be used at times when the circulation seems to overburden the heart and when for any reason the better remedy, rest, can not be applied. In chronic heart disease in individuals with specific taint, occasionally brilliant results have been obtained by specific treatment, the heart tone being apparently much improved under the course of medication.

The occasional use of mercurial purges in patients with chronic cardiac disease, who habitually overeat, is very important.

The use of alcohol in chronic heart disease is often baneful in its effects, and it is extremely difficult for the patient to break the habit. In the ordinary drunkard it is really the heart that cries out for alcohol when an attempt is made to stop its use, though the effects of the depressed heart are referred to the stomach, brain and general circulation.

The habitual use of alcohol is also to be discouraged on the ground of causing unnecessary exhaustion of the heart muscle and a tendency to tissue degeneration throughout the body It is to be remembered

that fat is as often an indication of misdirected nutrition or degeneration as it is of hypernutrition. On the other hand in emergencies there is no drug so useful as alcohol in developing quickly and strongly, and at the necessary moment, the latent powers of the heart.

A discussion of the management of chronic heart cases would not be complete at this time without some reference to the influence of thyroid activity upon the heart's action. Without going into a full discussion of the probable fact that exophthalmic goitre is due to a hyposecretion of thyroid products, and that many conditions resembling obesity with its accompanying sluggishness of heart's action and tissue metabolism are to some extent dependent upon an under secretion upon the part of the thyroid, we can not but feel like administering the thyroid gland, at least in an experimental way, to those cases of chronic heart disease in which the heart as a whole and the heart fibers seem to be impaired in their action by fat. One of the most distressing complications of chronic cardiac disease are the attacks of pain, whether or not we dignify these attacks by the name "angina pectoris." The treatment of the attacks when they occur is not to be discussed here. The patients who seem to be liable to such attacks should often systematically take iodid of potassium.

While we have gone over at some length the considerations which are to be reviewed in forming a plan of management for each case, still much remains for the domain of individual judgment. In these patients much must be considered besides the actual objective symptoms at the time of the examination. Hereditary tendencies are a factor which must never be overlooked. If several members of the patient's family have succumbed to cardiac disease at about the same period of life, it is always a grave element in prognosis. That mysterious force, or rather storehouse, which we call latent energy, can not be fathomed and its capacity estimated with any degree of certainty. We have all of us seen patients who had apparently reached a state where compensation seemed impossible, gradually climb to a state of fair health and comfort. We have also seen patients who had gone on well for a long period of time, without apparent cause, suffer a loss of balance and perhaps go very quickly to a fatal termination.

In emphasizing the importance of hygiene in the management of cardiac disease during the quiescent period there is no stronger warning than that a recurrence of valvular inflammation is sure, by extension as well as by overwork, to involve the heart muscle in a secondary degeneration. Anti-rheumatic treatment should be instituted whenever any return of inflammation is feared, and the case should, for a short time at least, be managed with absolute rest, and the bland diet suitable to the inflammatory stage.

In discussing this subject we have not considered very much the particular lesion which might be found in the valves upon examination. We can not lay down specific rules for the management of mitral insufficiency, another set of rules for mitral stenosis, though the same management would be much more efficient when the former is the predominant lesion than when the latter exerts the greater influence. We can not treat a valvular lesion directly. Our prime object is to keep nutrition of the heart as good as possible, and by this we mean the avoidance of degeneration and the avoidance of excessive hypertrophy. The nervous mechanism of the heart, as representing the conservator of heart energy, must be treated with consideration.

It would be an interesting question to have definitely decided whether the actual volume of blood is greatly influenced by any practicable degree of dry diet. It has always seemed to us that the mechanism whereby the volume of fluid is maintained at a certain normal level was so perfect that any attempt to alter the volume of the blood by putting that mechanism on the strain must be inevitably fruitless. It is different, however, with the practical reduction of volume obtained by the use of nitro-glycerin, and such drugs, which diminish the resistance and by relaxing the smallest vessels bring about a relative reduction in the volume of blood.

In these ways and by many other little details, with the coöperation of an intelligent patient who understands thoroughly his condition, we can care for and maintain an even condition of apparent health for many years. Far more satisfactory is such a procedure than the up-hill work of the treatment when compensation has not been maintained, a contest which however much prolonged has but one final termination.

LYCOPERSICUM CARDIOPATHIA.

Read in the Section on Practice of Medicine at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY W. T. ENGLISH, A.M., M.D.

PROFESSOR OF PHYSICAL DIAGNOSIS IN MEDICAL DEPARTMENT OF WESTERN UNIVERSITY OF PENNSYLVANIA AND CONSULTANT IN CHEST DISEASES IN THE SOUTH SIDE HOSPITAL, PITTSBURG, PA.

The lycopersicum esculentum, natural order of solanaceae, indigenous to South America, is a vining plant with irregular sessated leaves, bearing fruit of various shapes and colors. It is also known as the "love apple," but more commonly is called the "tomato." It was introduced into America in the latter part of the sixteenth century as an ornamental natural curiosity, and was found only in the conservatories of the wealthy. On account of its peculiar beauty it was subsequently taken to Europe. The fruit was considered poisonous to the human, but was observed to be eaten by lower animals. This fact excited Yankee curiosity and it was tested and adopted as an article of diet in some sections of America. It was not until the beginning of the civil war that its acceptance as an edible food became general. Europe has not up to the present given it general welcome as a food. Its principle utility is that of a relish and an agreeable addition to sauces. However, some people regard it as a wholesome and desirable acquisition to the list of foods. Because of its low nutritive value it does not merit a place with substantive aliment. Analyses have placed it among the vegetables consisting of over 85 per cent. water. According to Chambers and other writers on dietetics it is a diluent and not a food. The fluid element has been found to consist of an acid, called by some acidum lycopersicum. Others have claimed the acids to be acetic and malic in combination. Notwithstanding the almost universal indulgence in this fruit there is a certain proportion to whom it acts as a poison. In some the symptoms are gradually developed; in others they become immediately alarming. Some cases show no immediate evidences, but the results are cumulative. Once the abnormalities appear they are liable to continue to increase as long as the fruit is ingested. Even in

those, who for a time abstain, it is observed that the hiatus in the symptoms does not diminish susceptibility, but that the organ influenced retains it in the same degree as when the habit was omitted; and, that, despite apparently normal findings, it is proven that there is engendered an abnormal hypersensitive condition in the heart and circulatory apparatus; and if the toxic effects are once experienced they are more easily excited thereafter. First it appears as a simple cardiac irritability, but persisted in, it assumes the character of a latent endocarditis and endoarteritis favoring the deposition of the products of inflammation throughout the circulatory apparatus, but more especially about the aortic roots and valves. The circulatory tubes, as well as the central organ, contribute to the concomitant faulty functionation so that perturbation of circulation and organic changes constitute the zenith point appropriately denominated *lycopersicum cardiopathia*. It is in the direction of the heart and circulation that the tomato habit exerts its ill effects. In early stages, in most cases, little abnormality can be found, but the apparent relation of cause to effect is empirically determined. The heart passes out of the condition of equilibrium into a habit of irregularity and inequality of rhythm and force. Dyspnea supervenes, limiting the capacity for exertion. Age and sex are influential factors. Adolescence and puberty with their new obligations make these periods especially liable. Heart development adds a new impetus to the irritation. The aged with the circulatory apparatus already upon the verge of change readily receive the initiative thus extended. Women during pregnancy and also at their menopause are often among those who exhibit the most severe and immediate results. In many maladies there is a peculiar pathology belonging to the rich man because of excesses, and on account of poverty and self-denial the poor man has his peculiar ills, but the tomato cachexia fastens itself upon each with the same hostile grasp.

Doubtless many cases of the tomato heart occur among those who are susceptible to a marked degree, and this sensitive condition permits the disturbance to augment in geometric rather than in arithmetic ratio. This predisposition aids in establishing a pathologic modality, which is readily observed to be a factor. But there is a growing sensitiveness noted at each succeeding alarm, until the body betrays its sympathy with the heart and circulation. But again there are those from whom the suffering line is very far removed and to whom even sentimental fears are distributed with extreme parsimony. These different neurosal types constitute the extremes in these cases.

Among the pathologic phenomena that appeal to us are the acidulous conditions of the stomach and the bodily fluids. With this state of the fluids there is a concomitant lowered alkalescence of the blood. The blood pressure is high because of the peripheral vasomotor contractions incident upon the variations in the blood of reduced alkalinity. The subendocardial ganglia also feel its influence directly applied to the sensitive endocardium. The ganglia in the muscular substance are brought into intimate relations with the blood through the medium of the coronary arteries and their branches and these are likewise perturbed.

High blood pressure excites the heart to vigorous action and causes a spastic rather than a paralytic condition. Myocardial weariness is induced and corresponds with the excitement as to degree and persistence. Because of the irregular and spasmodic stimulation of the ganglionic cells there is a gradual deterioration in nutrition, beginning primarily with the trophic nerves and extending its pernicious influence to the other nerve supplies, materially damaging the cardiac enervation and begetting irregular action. At each succeeding paroxysm of palpitation there is noticed an increased inability to adjust the errors existing between blood pressure and heart action. Each paroxysm becomes easier of precipitation, and although the individual is more accustomed to the turbulance, the alarm and sensation are on the increase. The perfect functionation of the heart is held in abeyance by the continuous ingestion of the tomato, and the irritation becomes chronic. When long continued there are organic changes introduced, the tomato habit acting primarily as an irritant and later becoming an excitant to the already abnormally irritated organs. The left ventricle being more sensitive than the right, it is impelled to a premature attempt at systole, causing irregular rhythm, and this, together with the overfilling of the capillary pulmonary circulation produces a prodromal asthma, which remains prodromal only so long as the heart maintains its unchanged structure.

Observations have been conducted over fifteen years and experience assures me that at least one-half of those who use them suffer more or less, while one-fourth are obviously injured. A small percentage exhibits all the evidences of acute poisoning.

The symptoms first noted are those of the immediate effects of acidum lycopersicum upon the stomach and prima via. Pain and gastric uneasiness are succeeded by burning, choking, pyrosis and heartburn. These are succeeded by acid eructations with gaseous emanations from the stomach and, in some cases, vomiting.

Borborygma and active peristalsis are the enteric announcements, and these are speedily succeeded by stools of fermentative and offensive character. Eructations or expulsions of intestinal gases give temporary relief to the asthmatic oppressions, which proves that mechanical distention has something to do with the symptom of dyspnea. The appetite is usually good until the onset of these symptoms, when the desire for food is supplanted by a craving for drink, which is the result of irritation, or congestion, of the gastric mucous surfaces. There are some cases in which these local symptoms are pronounced immediately after the ingestion of the fruit. The matter vomited is acid and of an odor betraying fermentative action. The excretions are acid, and the emunctories are usually very active.

Rapidly following these local phenomena pertaining to the digestive tract there is a rise in blood pressure proven by sphygmographic tracings. If the pressure is already high, it will be still higher. The tactile sense appreciates it in the apex beat and the pulse.

One of the most constant symptoms of the tomato malady is the sighing respiration. The missing heart beat or the half executed circulatory cycle conveys to the patient the startling announcement that there is a serious and sudden arrest of vital activity within the thorax and it creates in the psychologic function as well as in the conceptions of the mind an uncomfortable surprise. The gap in the circulation is associated with a spasm of the respiratory function and a gasp for breath is the effort for relief. The patient's mental, moral and physical sympathy is

aroused with as much earnestness as if he were receiving the immediate herald of impending death. Unlike the habitual mountain climber's heart and respiratory organs, the tomato habit observes no quietus from custom, but at each return the irritation seems to find more sensation and prompter response. If the paroxysmal palpitation reaches its typical acme, as in the very acute forms, the distress and anxiety are so pronounced that they approach all the terrors of true angina pectoris. Cold sweats appear upon the forehead and there is an imaginary intensity in the symptoms of bodily and heart fright, which steals over the patient's senses, that can not be measured by comparison with those which are real. The fluttering and fullness in the precordial region continue after the subsidence of the violence of the paroxysm, and are associated with cephalagia, supra-orbital tension and a constitutional languor. In acute cases speech is greatly impeded and articulation at times almost impossible, though there is never complete aphasia. Together with this indistinct enunciation there is occasionally an incoherence of thought and several ideas seem to seek expression at the same time. Disturbed vision, floating objects in the visual field, beating and singing in the ears, giddiness, mental apparitions, numbness of the fingers and tongue, and general perversion of the senses, constitute a part of the neurosal procession.

Some marked cases have been observed by me, which have presented a complete panorama of these symptoms within two hours after the ingestion of tomatoes. A number of patients are under my observation upon whom these symptoms can be reproduced within two or three hours after introducing into the stomach two ounces of tomato fruit. Immediately in some cases the irritation of the peripheral nerve terminations in the stomach produces a species of nervous cyclone, or a little nerve storm in the heart and its intrinsic ganglia. The symptoms which have arisen after the ingestion of tomatoes in the presence of preëxisting heart maladies have been deplorable, and have been introductory to, if not the immediate prodromata of death. In weakness of the respiratory muscles there will be corresponding augmentation of attending distress. In emaciated persons or those reduced by poverty or loss of blood the symptoms of palpitation are precipitated with alarming celerity. The use of tomatoes as an article of diet among pregnant women is followed by tumultuous demeanor of the heart, and where predisposition to abortion obtains may produce hapless results.

During the developmental period of the heart—especially that marking the rapid increase in cardiac growth between adolescence and maturity—the tomato should be discarded as likely to occasion unpleasant symptoms and precipitate evil. The period when it seems foolhardy for women to use this fruit is at the climacteric, on account of the abnormal cardiac phenomena they excite and the disposition to inflame preexisting nervous irritability.

The diagnosis of the disorder propria is usually not difficult, if we are once rid of the preconceived notions with which the symptoms enumerated have been connected. One is likely to fall into the habit of estimating by former and more familiar standards. Some effort will become necessary to disassociate them from dyspeptic symptoms and phenomena connected with cardiac lesions. This need becomes the more urgent to my mind, when I recall the fact that of the heart maladies sent to me for diagnosis, a large percentage are functional and fully one-half of these are due to the tomato habit. When once pointed out, however, these cases can scarcely be overlooked or their symptoms confounded. The history will aid us, and if one attack does not satisfy our mental questioning, there will be little loss of time until another opportunity is secured to indulge in a second observation, as patients are loath to accept the theory of tomato poisoning; and under any circumstance humanity, including the medical man, is slow to acquiesce in anything which limits dietetic privileges. While the picture presented may not be as complete as the present aspect of medical inquiry demands, it is as conscientious and faithful as I can at present give.

The best treatment is to abstain from the use of tomatoes. During a paroxysm, and immediately succeeding one, it is needful to employ an antidote to the toxic conditions. This agent should include the capacity to annul the irritation that is local to the stomach and prima via, as well as to place a quietus upon the neurosal storm which is usually present in the acute form of the malady. This agent is acetanilid, one of the coal tar products; and it is always applicable, except in the chronic cases attended with heart degeneration. The following prescription is as perfect an antidote to lycopersicum poisoning as I have discovered:

R	Acetanilid	ʒij	8
	Spr. vini rect.	ʒij	64

Misc. Sig. Teaspoonful in water hourly until three doses are taken, thereafter every eight or ten hours.

This clears the vision, restores the wandering senses and rapidly places the organs within range of their lost tonicity. On its exhibition there is almost immediately a clarification of the visual and mental fields, and a return, within an hour after the first or second dose, to a desirable circulatory and respiratory calm. Some slighter neurosal phenomena as tremor and general depressions are more deliberate in their leave taking.

Antacid diuretics are needful to divest the bodily fluid of the influence of acidum lycopersicum. Quiet and general hygienic restrictions are always commendable.

There is a peculiar virulence to acidum lycopersicum that can not easily be overpowered, and its effects remain apparent in the stomach and intestines for some days, despite the use of alkalin purges and occasional draughts of lime or potash water. The use of disinfectants is to be commended, as of creosote, charcoal, etc. Observations of the patient's diet are necessary in a special way. The most wholesome articles of diet in ordinary conditions must, in many of these cases, be avoided. Milk is not admissible immediately after, or during an attack, as it forms into a substantial curd and is totally undigested. Eggs are rendered rancid. The diet should be restricted to light foods and those easy of digestion, and this restriction should be continued for at least one week. Tonics and supports for the offended nervous system are to be employed, and when greatly irritated they demand sedative treatment. The former may be secured by the administration of strychnia. The latter is accomplished by the use of chloral or the bromids. Chloral acts well if the patient is persistently somnolent.

The circulatory changes involving myocardial

degeneration or including sclerosis of the tubes will suggest recourse to special cardiac support and remedial agents.

To a number of medical men I owe my thanks for faithful observations, and the record of facts associated with the use of the lycopersicum esculentum in public institutions, hospitals and alms houses, which I can not detail here.

Personal experiences are in my possession, delivered orally and in writing by those who have individually noted the deleterious effect of the acute attacks as exemplified in their own bodies and which are not within the scope of this paper to recite. They, however, suffice to prove the tenable ground upon which this theory is based. General depression is reported to have been a common sequence to their employment in one of the alms houses near Pittsburg and also in several of the hospitals in the vicinity. Many of those who were in health were reported as being depressed, while the ill were rendered worse after their use. This would lead us to the conclusion that those in charge of hospitals, alms houses and other charitable institutions in which they are employed should expunge them from the list of foods.

The supplies for the military should never include this vegetable, as it has been abundantly proved that it can not be for the physical good of the men or subserve the interests of hygienic and economic food supply.

At any time when any great mental or bodily endurance is required, the tomato is treacherous and can not be relied upon as a food. When some acute loss or bereavement occasions emotional influences that call for cardiac reserve force, and under all circumstances where fortitude is demanded, the ingestion of tomatoes is to be discouraged. Those who are called upon to endure loss of sleep or mental strain, the student, the speaker or the statesman, will find them worse than useless.

DISCUSSION.

DR. PAUL PAQUIN, St. Louis—I never before knew that tomatoes were injurious to mankind. According to the paper, I should have been dead ten years ago, and I doubt if many of us would remain in good health. I remember when the tomato was not used at all as an article of diet, but since then it certainly has been used very extensively, and I had never before supposed that there was anything poisonous about it. But I would like to know if we are still to have some other kinds of heart. We have a tobacco heart, we have the onion breath; probably we will have a carrot heart, and a potato heart. I doubt, indeed, if we will ever be able to make a list of the vegetables which we may eat safely. Are not some of the results attributed by the author to eating tomatoes produced by eating anything, almost? I would like to know on what scientific investigation it has been discovered that the tomato is a baneful enemy of mankind.

DR. HILL, Milwaukee—I wish to say that in my opinion the symptoms which he has ascribed to the tomato are the result of wind on the stomach—being the direct effect of fermentation. I wish to call attention also to one other fact, that is, that in rural districts where the tomato is grown and ripened on the vines these results are not often observed: that it is not only not harmful, but that it acts as a most excellent regulator of the bowels and an excellent article of diet. But in cities the tomato, like all other fruits, has been of necessity shipped in the green state and not allowed to ripen by nature's process, but by the process of putrefaction, which continues in the stomach, and if used in large quantity it produces fermentative change and the results named in the paper. One other remark; it concerns his treatment. It is the use of two drugs diametrically opposed to each other, one a cardiac depressant, the other a cardiac stimulant—acetanilid and alcohol. I would suggest that it is rather to the alcohol that the relief is due, because the alcohol given in that form, although not quite as efficient as the aromatic spirits of ammonia, acts as a stomachic, relieving the stomach of its gases by stimulating the action of the muscular fibers and increasing peristalsis, as well as incidentally stimulating the heart.

DR. J. W. GROSVENOR, New York—I would ask the reader if he knows what the toxic agent is that produces these dire results. Have any chemical studies been made to show what the toxic principle is?

THE CHAIRMAN, DR. QUINE, reminded Dr. Grosvenor that it had been suggested in the paper that the toxic agent was acidum lycopersicum.

DR. ENGLISH—Dr. Hill, who has called attention to the fact that my prescription is incompatible physiologically, is certainly correct, and its very incompatibility is the very essence of it. In the first place it contains acetanilid, an anti-acid, which has a corrective action on the conditions in the stomach generated by the tomato, but at the same time depresses the heart. It is necessary to support the heart by the use of alcohol. It is the proper way to employ acetanilid unless you want to employ it for its depressing effects.

THE EFFECT OF ALCOHOL ON THE ORGANS OF SPECIAL SENSE.

Read in the Section on Practice of Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, Atlanta, Ga., May 5-8, 1896.

BY J. W. GROSVENOR, M.D.
NEW YORK.

No extended argument is needed to demonstrate the effect on the organs of special sense[1] of alcohol in large quantities, sufficiently large to destroy temporarily the functions of these organs.

Any person in the condition in which he may be properly called "dead drunk" is completely narcotized. His entire nervous system is paralyzed. He may have taken a half pint or a pint of whisky or brandy. Either of these amounts is a large quantity, the former for a child, the latter for an adult.

The person overcome by a complete alcoholic stupor has lost for the time being the functions of the special senses. Speak in stentorian voice to the victim of such a condition and he gives no sign of the existence of the sense of hearing; expose his eyeballs to a bright light and the pupils give no response to indicate the presence of vision; prick and cut the body with a sharp instrument and he manifests no sense of feeling; place the most pungent volatile substances near his nostrils and you observe no suggestion that they painfully affect the olfactory nerves. He is as profoundly narcotized as though he were fully under the influence of ether or chloroform.

The person who has taken an alcoholic drink in quantity sufficient to place him under its positive influence though not sufficient to profoundly narcotize him, who is able to control his acts to a considerable extent suffers in his organs of special sense in like manner, though not to the same degree, as the person whom it has completely overwhelmed with narcotism.

Hearing is lessened, as evidenced by the fact that a much louder voice than ordinary is necessary in order to attract the attention; such a person on the street for lack of normal vision frequently comes in contact with a post or another person; the sense of feeling is blunted, since he may fall and bruise himself severely without complaint of injury or pain; or he will drink a glass of rum, brandy or whisky without observing the caustic effect usually produced upon the mucous membrane of throat and stomach.

It is a well-established fact that the sense of sight is permanetly injured by the excessive use of alcohol. Amblyopia alcoholica is noticeable in the early stage of alcoholism. The disease advances or recedes

[1] Special attention is directed in this paper to the senses of seeing, feeling, hearing and weight.

according as the amount of alcohol taken is increased or diminished. The pathologic factor of the disease is an interstitial neuritis, proliferation of connective tissue followed by degenerative atrophy of the optic nerve. This disease has been clearly described by Dr. Charles H. May. (*The Medical Temperance Journal*, July, 1891, taken from *Quarterly Journal of Inebriety.*)

The effects upon the organs of special sense of extremely large and moderate quantities of alcohol as stated above have been recognized by common observation ever since the discovery of this substance several centuries ago. Among physiologists and therapeutists of the present day there appears to be no very marked difference of opinion as to the most prominent effects of alcohol upon the human organs when taken internally in large quantities.

It is acknowledged to be an anesthetic, a paralyzer. Opinions widely diverge, however, as to its effects when taken in small or minute quantities.

The effect of exceedingly moderate or minute quantities of alcohol upon some of the organs of special sense has been demonstrated by carefully conducted experiments. Of all scientists, perhaps no one has wrought more thoroughly and satisfactorily in this field than Dr. J. J. Ridge, of London, England. For the purpose of determining the effect of small doses of alcohol upon the sense of feeling he used an instrument which is best described in his own words:

"An instrument was constructed in which were two points in an upright position, and about half an inch apart. A third upright point was situated between the two, and was capable of being moved in a straight line nearer to one or the other of the stationary points. These three points were covered in so as to be invisible, but the forefinger could be passed through a hole in order to feel them. The middle point was moved by a rack and pinion, and the person tested was required to move it until, in his opinion, it was as nearly as possible equally distant from the two outside points. The movement of the middle point was recorded on a dial invisible to the subject of the experiment. This form of instrument was preferred to the ordinary esthesiometer, because in that instrument (in using which the person has to state the earliest moment that he can distinguish the points of a pair of compasses or two, while they are gradually separated) imagination might more easily vitiate the conclusions."

The results of his experimental researches made upon the sense of feeling, with the instrument above described, are embodied in the following table:

FEELING.

Ab. Abstainer.	Number of degrees on the dial from exact center *before* alcohol.					Average.	Number of degrees on the dial from exact center *after* alcohol.					Average.	Amount of absolute alcohol given.
Ab...	6	6	3			5	10	8	10			9.3	2 drams
Ab..	6	30	4	30	10	16	20	24	46	45	5	28.	2 drams
Ab...	8	40	7	9		16	33	24	7	30		23.5	2 drams
Ab...	3					3	14					14.	2 drams
Ab...	75					75	115					115.	2 drams
						115						189.8	

The quantity of alcohol, two drams, given to each individual tested may reasonably be regarded as quite small. Five abstainers were tested, the total number of tests being fourteen *before* and the same number *after* alcohol was given. The average number of degrees on the dial from the exact center *before* taking the alcohol was 23; *after* taking the alcohol 38. The smaller number represents the greater sensitiveness of feeling or touch.

This may not be regarded as a great difference, but it is a difference that is positive and shows that so small a quantity of alcohol as two drams may sensibly affect the nerves of feeling and decrease their sensitiveness.

The effect of small doses of alcohol upon the sense of vision was tested by Dr. Ridge as described by himself as follows: "Vision was tested by noting the distance at which a row of letters could be read with one eye without alcohol, and then the distance at which the same letters differently arranged could be read with the same eye afterward. The distance varies very greatly in different individuals; but of course in the same individual it would remain the same, provided that the alcohol had no effect. Indeed, one might naturally expect a slight improvement in the latter trials, by reason of the fancy letters employed. The following table gives the results obtained:

VISION.

Ab. abstainer.	Distance of distinct vision in feet *before* alcohol.				Average.	Distance of distinct vision in feet *after* alcohol.				Average.	Amount of absolute alcohol given.
Ab.	7	7.25	7	6	6.81	7	6.75	6.50	5.75	6.50	½ dram
Non-Ab.	9	7	7	8.5	7.87	8.75	6.75	5.75	8	7.31	1 dram
Ab.	10.50	10.75	10.5	10.5	10.56	8	9	7.5	9.50	8.50	1 dram
Non-Ab.	4.25	5.25	5.25		4.91	4.50	4.50	4.25		4.41	2 drams
Ab.	10.25	9	7.25		8.83	9	9.25	8		8.75	2 drams
Ab.	11.25	11.25	10.25	9.5	10.56	10.50	10.50	11	8.50	10.12	2 drams
Ab.	15	10.5	13		12.80	13	10.50	12		11.80	2 drams
Ab.	9.25	10	25		9.75	8.50	8			8.25	4 drams
Ab.	6	6	5.75		5.91	5.25	4.75	4.75		4.91	4 drams
Ab.	16	15.50	15.75		15.75	14.75	14.50	15.25		14.83	4 drams
					93.75					85.38	

General average—9.375 before; 8.538 after."

Ten individuals were tested, eight abstainers and two non-abstainers. Thirty-three trials were made before the ingestion of alcohol and the same number after its ingestion. The average number of feet at which the letters could be read before taking the alcohol was 9.375, after taking it 8.538. Expressed in inches the difference was 10.044. This number represents that on the average the individuals tested, in order to see the letters distinctly, were obliged after taking the alcohol to approach 10.044 inches nearer to them than before taking it.

One of the individuals took ½ dram, two others 1 dram each, four others 2 drams each, three others 4 drams each. In the case of each individual the average of his tests showed that his vision was decreased in from fifteen to thirty minutes after taking the alcohol.

The average difference in the vision point before and after the alcohol doses in the majority of cases was not very large; indeed, in some of them it was quite small. In one it was more than two feet, which is 19.50 per cent. of the larger distance. The average of all the tests showed that it was necessary to shorten nearly 9 per cent. after taking alcohol the distance between the vision point and the letters before taking it. Derangement of vision, in the form of hallucinations, is recognized as an every-day occurrence in cases of acute alcoholic delirium, the sight of strange things and living creatures that can not possibly exist at the time within the range of vision.

The same experimenter, Dr. Ridge, tested the muscular sense of weight before and after the ingestion of small quantities of alcohol. He has thus described his method of procedure:

"The amount of muscular force required to overcome different resistances is measured by a special sense connected with the muscles but exercised by the nerves. Comparison between two weights requires the action of the judgment. The more acute the perceptive faculties are, so much the more readily will the judgment decide upon small differences between two weights. The effect of alcohol on this muscular sense was determined by an arrangement in which a weight was attached to a certain lever, and the person experimented upon was required to slide an equal weight along another lever exactly similar to the first until, in his opinion, the weights appeared to be the same. It is obvious that the position of the weights on each lever ought to be exactly the same and, therefore, the more sensitive the muscular sense is the nearer will the individual be able to place them before he ceases to detect any difference." The following table gives an exhibit of his results:

WEIGHT.

Ab. abstain'rs.	Distance between the weights, in millimeters *before* alcohol.					Average.	Distance between the weights, in millimeters, *after* alcohol.					Average.	Amount of absolute alcohol given.
Ab.	14	8				11	7	20				13.50	½ dram
Non-Ab.	22	10	16	18		16.50	18	20	20	22		20	1 dram
Ab.	3	4	2	10		4.75	8	4	8	3		5.75	1 dram
Ab.	4.5	7	9	7	7	6.90	13	11	12.5	18	13	13.50	2 drams
Ab.		2	9	5		4	5	4	13	10		8	2 drams
Non-Ab.	2	4	5	2		3.25	10	4	4	6		6	2 drams
Ab.	2	2	5			2.25	1	7	4	3		3.75	2 drams
Ab.	5	7	9			5.25	10	8	8			6.50	2 drams
Ab.	9	1	11		1	4.40	3	8	11	15	4	8.20	2 drams
Non-Ab.	2	3	4	1		2.50	6	6	8	3		5.75	4 drams
						60.60						90 95	

General average—6.060 before; 9.095 after.

Dr. Ridge thus sums up his tests upon the muscular sense of weight:

"From this table certain facts are apparent: 1, that in every case the average sensibility to weight and power of discrimination was decidedly diminished by small doses of alcohol, the general average indicating that the sensibility is diminished about one-third; 2, that single trials are not reliable, since many circumstances may unite to produce a fallacious result. Thus some of the trials after alcohol were actually more accurate than some of those before it, although the average of each individual conforms to the general average of the whole; 3, that non-abstainers are affected, as well as abstainers; 4, that small doses act in a similar way to large doses, and that the difference is only in degree, not in kind."

The deceptive nature of alcohol was observed in all these experiments. Each person tested was confident that his powers were equal to the accomplishment of more than scientific experiment showed was possible. This fact teaches that the alcoholic drinker's assertions as to the integrity of his special senses are not reliable. His organs of special sense may have lost a considerable portion of their natural powers and he may still be unaware of this condition.

Experiments made by Dr. Scougal upon the sense of hearing show that alcohol in small quantities affects this special sense in the same way as the other organs of special sense are affected by it.

Dr. T. D. Crothers has made simple tests of the sense of hearing and has arrived at similar conclusions.

In cases of alcoholic insanity the sense of hearing is frequently disordered. In this form of insanity the occurrence of hallucinations of hearing has been noted often by those who have the care of the insane; unusual voices and sounds that at the time have been beyond the reach of normal hearing. Aural and visual hallucinations have led to many fatal assaults upon supposed enemies, the assailants believing that the false impressions received through the senses of sight and hearing were true.

Some observers have noted in cases of alcoholism that the special senses suffer occasionally in one half of the body; there is loss of sight of one eye, hearing of one ear, taste of one half of the tongue and smell of one nostril.

The results of these experiments declare in unequivocal language that alcohol in small or extremely moderate doses weakens the nervous supply of the organs of feeling, seeing, hearing and weight; that to a certain extent it paralyzes these special senses.

According to Dr. Ridge, "Dr. Lionel Beale long ago pointed out how it (alcohol) affected the protoplasm of cells and diminished the movements of amebæ, to which leucocytes are apparently analogous." Dr. Ridge has found that the action of alcohol on leucocytes is injurious. His experiments with plants show that they do not thrive when watered with water which contains half of one per cent. of alcohol; that thus vegetable protoplasm is materially injured. The vegetable cell is not so very different from the animal cell as to prohibit the belief that if the protoplasm of the former is injured by minute doses of alcohol, that of the latter is affected in a similar manner.

Dr. Ridge has also discovered that alcohol in almost incredibly small quantities will promote "the growth and multiplication of microbes whose function is antagonistic to the protoplasm of organized beings." "In the presence of these minute quantities of alcohol decomposition goes on more rapidly and the micrococci and bacilli thrive and swarm more abundantly." He has thus shown that alcohol in the minutest quantities is injurious to "constructive protoplasm" and favorable to "destructive protoplasm."

Without doubt the protoplasmic nerve cells of the organs of special sense are as sensibly affected by alcohol as the cells of any other tissues of the body. Consequently the effect of minute quantities of alcohol on both vegetable and animal cells is a strong argument that it injures the constructive protoplasm and favors the destructive protoplasm of the organs of special sense.

Dr. Prout's experiments made more than eighty years ago proved that alcohol in a small or moderate quantity lessened the amount of carbonic acid exhaled from the system. More than a physiologic amount remained in the system to act as a poison upon the tissues and fluids. From this result the legitimate conclusion can be drawn that the special senses would suffer their share of injury.

It is a fact well-known that the long and excessive use of alcohol internally has a degenerating influence upon nearly all the solids and fluids of the body. This is quite noticeably true of the nervous and circulatory systems. Growing cells become deteriorated, tissues are hardened, blood loses a part of its vitalizing elements. It is not unreasonable to believe that as the whole system is burdened with this "genius of degeneration," alcohol, the organs of special sense must bear their proportion of the burden.

During the last few years railroad managers have

observed the injurious effect of alcohol upon their workmen when occupying positions that require delicacy of touch, keenness of vision and acuteness of hearing. Not long since a large railroad corporation investigated the conditions surrounding every accident that had occurred on its lines during the preceding five years. It was found that 40 per cent. of all accidents were due entirely or in part to drinking men. In 18 per cent. it was strongly suspected that the drinking habits of employes was the cause of the accidents. The company in a single year lost property to the amount of one million dollars through the incompetency of beer-drinking engineers and switchmen.

Michigan has passed a law which imposes a heavy penalty upon those railroad companies which employ men who are in the habit of using alcoholic intoxicants. Railroad managers, as practical business men, are recognizing the utility of employing total abstainers as a measure calculated to reduce financial losses on account of accidents.

Some railroad companies prohibit their employes from drinking any kind of intoxicants and from entering a drinking saloon during working hours; other railroad companies demand from their employes the signing of a total abstinence pledge which shall hold good for every hour of every day.

This action of railroad managers shows their appreciation of the doctrine that even small quantities of alcohol impair the organs of special sense, and that in order to do the best work in railroad business the workman must have eyes, ears and hands perfectly free from the poisonous touch of alcohol.

From the experiments and investigations herein detailed we are warranted in drawing the conclusion that alcohol in small quantities does not act upon the organs of special sense as a stimulant, but as a depressant; not as an energizer, but as a paralyzer. The claim that alcohol in any quantity strengthens and sharpens the vision, the touch, the hearing, has no defensible foundation for its support.

If these conclusions are reasonable concerning that part of the nervous system that supplies the organs of special sense, may we not assert with reasonable certainty that the same result obtains in other and, indeed, in all other parts of the body? Surely the nervous cells are not so very unlike in different parts of the organism as to forbid this conclusion.

Neither does alcohol in small doses differ in quality from alcohol in large doses. One drop of it has the same characteristics as a thousand drops. The large quantity produces a more powerful effect than the small quantity, but in kind the effect is the same.

In the study of this subject some of the thoughts which have been forced upon my attention are as follows:

1. Guided by the chief characteristic of alcohol, its paralyzing influence, is it not more appropriate to call it a depressant than a stimulant?

2. If alcohol becomes popularly known as a depressant, will it not be less frequently used by the laity in those physical conditions which are commonly supposed to demand stimulation?

3. Knowing that alcohol is a depressant even when given in small doses, ought not the medical profession to exercise great care in administering it in debilitated states of the system?

4. The use of alcoholics hypodermically in cases of heart failure or arrest of respiration caused by ether or chloroform narcosis is bad practice.

5. It is the duty of the medical profession of this country, clearly and fully comprehending not only the damage to the organs of special sense, but also the ravages upon all the important organs of the body caused by alcohol, to discourage by every laudable effort the habit of drinking alcoholic intoxicants, to the end that our national life may be characterized by physical and moral integrity, clear brains, steady hands and brave hearts.

DISCUSSION.

Dr. G. W. Webster, Chicago—I have yet to find any form of illness or sickness, or any condition of health, where alcohol in any dose acts as a stimulant, as we understand the word stimulant. Not that I wish to be understood as objecting to the use of alcohol in its proper sphere, but it is never, under any circumstances nor in any dose, a stimulant. There is not one particle of evidence with which I am acquainted based upon careful observations, that will for one moment justify us in stating that alcohol is, in any dose or in any sense, a stimulant. It is, in all doses and under all circumstances, a depressant, an anesthetic.

Dr. Yager, Kentucky—I speak now of this subject in a medical sense, and wish to endorse to a great extent what Dr. Grosvenor has said. While I give whisky in sickness, I have not touched a dram of it myself, but became its opponent from a moral sense.

Dr. H. A. Hare, Philadelphia—If it is possible for anyone to say that there is no evidence that alcohol acts as a stimulant, it is perfectly possible for it also to be said that the world does not go round. Now, you may bring every citizen of Atlanta into this room who knows anything at all about the matter, and he will tell you that under some circumstances alcohol does act as a stimulant, and how it is possible for any physician who has used alcohol properly in the treatment of disease to say that under certain circumstances it does not act as a stimulant, is to me most extraordinary. I have had a very large hospital experience, and have had the opportunity of watching the use of alcohol, not only in my own hands and in the hands of my colleagues, but in the hands of the most celebrated therapeutists of the world, and I repeat that alcohol acts distinctly as a stimulant. Furthermore, I wish, in this connection, to call the attention of this Section to what I believe to be the great danger of medicine at the present time. We are too fond either of saying that a remedy will cure every case of a certain disease, or that it is absolutely useless in all cases of that disease. I do not want anybody to think it is my custom to teach that alcohol is always, under all circumstances, a stimulant; but on the other hand, I do not want it thought that I regard alcohol as a depressant at all times and in all diseases. Digitalis can not be used in every cardiac case, and the same is true of alcohol. The sensible doctor is rational in his therapeutics and fits his drug to the case.

Dr. R. H. Babcock, Illinois—I believe that alcohol in appropriate doses is a cardiac stimulant; in too large doses, it is a cardiac depressant. My views upon alcohol are derived from my experience with it. Let me state an instance, the case of a physician whom I saw only last Saturday, who has a dilated heart, both right and left ventricles being dilated; has moderate arterial sclerosis, pulse ranges from fifty-two to sixty; who can not bear even small doses of digitalis, five drops producing shortness of breath and increased cyanosis. A moderate dose of whisky, in that patient, stimulates the heart to a pulse rate of seventy-two, the pulse becomes fuller and stronger, the color better, the patient feels exhilarated, and it is followed by no symptoms of depression. Now, if alcohol in moderate dose, the dose differs, of course, in individuals, stimulates that physician's heart to that kind of action, then I believe that alcohol in that case is a cardiac stimulant, not a depressant.

Dr. John A. Ouchterlony, Louisville—I can not say that I believe alcohol is a stimulant. I know it. Knowledge is always better than belief when we deal with matters which are capable of demonstration. I can not believe that all previous experience has been erroneous, that the great work quoted on narcotics and stimulants was a mass of nonsense. We can judge of the effects of alcohol as we judge of the effects of all other remedial agents that we are accustomed to employ in our efforts to cure disease. Alcohol in small doses, suitable to the patient, is undoubtedly a stimulant, and it is a very remarkable fact that the instincts of all nations have led them to bring forth from organic matters some form of alcoholic stimulant. That there should be universally such craving for an article which is absolutely injurious to the human economy, does not seem reasonable; on the contrary, I think that this very fact is an

indication that alcohol, according to the experience of all ages and of all nations, is a stimulant, capable of serving useful purposes, dietary and therapeutic.

DR. W. M. RICHARDS, Joliet, Ill.—I must endorse the Doctor's paper; as a stimulant, I have never yet ordered a dose of alcohol, nor have I seen an increase in the force of the heart. We do get a more rapid action of the heart, but it is simply from paralysis, not from stimulation. It simply paralyzes the capillaries, so that the heart can get rid of the blood which goes to it, and never stimulates. I have seen an athlete put up dumb-bells before taking alcohol, then wait a reasonable time after taking alcohol in order to get its effects, and try to lift them again, and he could not do it. You see a man come in cold; he takes a glass of liquor, and in a few minutes thinks he is warm. He is simply paralyzed, so that he is insensible to the effects of cold. He goes out under the influence of alcohol, feels that he is perfectly warm, sits down and freezes stiff. A man under the influence of alcohol thinks he is powerful enough to whip two men, but at the same time it requires two men to hold him up. Call that stimulation? He is simply paralyzed. I believe alcohol can be given in its place, just as you would use nitroglycerin, or any nitrite.

DR. MINOR, Ashville—I would ask the gentleman who has just sat down whether it is legitimate to draw conclusions as to the effects of alcohol from intoxicating doses. It seems to me it would be as justifiable to say, after observing the effects of eighteen grains of corrosive sublimate, that the action of mercury is always poisoning. It depends upon the amount of alcohol administered as to what effects will be produced. I see many who prescribe it indiscriminately, and I agree with those who deprecate such abuse.

DR. HARE, Philadelphia—I would like to call attention to a point of some importance, namely, the statement which has just been made that alcohol acts as a paralyzer of the capillaries; that it does not act as a stimulant; but that the increased rapidity of the heart is due to removal of pressure in front of the heart by paralysis of the capillaries. Now, I challenge that gentleman to present one jot or tittle of scientific evidence that his statement is correct. I refer again to the experiments of Cerna, of Castillo, and a number of foreign investigators as well as American, which prove beyond all doubt, as far as you can prove any scientific fact, that the administration of certain doses of alcohol, according to the size of the person or animal receiving it, produces a rise of arterial pressure and not a fall. And I can also prove by most careful scientific experiments that alcohol actually increases the quantity of heat which is manufactured in a man's body; that under its influence he will manufacture more units of heat in an hour than before he took the alcohol. And to show that I am not biased I may go on and say that at the same time alcohol increases heat production, when taken in overdoses it also increases heat dissipation, and the increase in heat dissipation is so much in excess of the increase in heat production that the temperature falls. It is not well to take an alcoholic stimulant and be exposed to cold, because, the blood goes to the surface of the body and carries with it a certain amount of warmth which is lost. When we expose our bodies to cold the peripheral capillaries become contracted, the blood rushes to the central vital organs to be kept warm by them, the subcutaneous tissue, and muscles. But in a warm room the blood again flows to the surface to carry heat with it. If we take alcohol before going into the cold, the blood which filled the inner vessels of the body, is driven out. It does not go there by paralysis of the capillaries. You do not see the peripheral capillaries congested by paralysis when a man dies. The peripheral capillaries are paralyzed by death, but does the surface become flushed and red? Not at all. It becomes white like marble. Why? Because the whole vascular system is paralyzed and the blood settles in the larger vessels. I would call the attention of the Section once more to what I claim is the fault in the whole study of therapeutics, namely, dogmatic treatment. In this instance the assertion has been made absolutely without citing a single authority, that alcohol does this or that; that alcohol paralyzes the peripheral capillaries in all diseases; that it lowers arterial pressure and acts like nitroglycerin. If the gentleman will produce facts to prove that, or if he can not, I want him to state that, in his opinion, that is the case, and not give it out as a definite scientific statement.

DR. HAINES, Ohio—It certainly has been shown, by all the gentlemen who have experimented and taught, that alcohol is a stimulant when given in proper doses and in the appropriate condition. I think we will find it has a stimulating influence, and one that can be safely relied upon in time of trouble.

DR. YAGER, Kentucky, stated that it was the universal use of alcohol which he was opposed to.

DR. JENKINS, Iowa—Whenever views on a medical subject are expressed which are entirely antagonistic to all the experience and the teaching of the profession and of those out of the profession, there is certainly something wrong. According to clinical experience I do not believe a small dose of alcohol can be otherwise than stimulating. I can not believe that this notion advocated lately, that alcohol is a depressant, and that its action can be explained along that line is correct. I look upon alcohol, like upon many other drugs, as exceedingly dangerous, but I should hate to discontinue its use because it is capable of doing harm, just as I should hate to discontinue the use of such a remedy as strychnia, or even some of the opiates, because they are capable of doing harm. Used in proper doses, and under proper circumstances, they all do a great deal of good.

DR. HILL, Milwaukee—That alcohol is, as it has lately been called, a narcotic, I think Professor Wood, in his vast work, has outlined it sufficiently well that we may understand it; a difference of opinion regarding the physiologic action of this drug, as in many others, being due to a difference between its influence when used as a therapeutic agent and as a toxic agent. Investigations which have led to the view that it is a narcotic or a soporific have been based on its use in almost lethal doses, and not in therapeutic doses.

There is another law in therapeutics which should be borne in mind in this connection, that any remedy which stimulates any nervous center will by its continued or excessive use produce paralysis of the same center. With these two suggestions in mind, I think we can readily reconcile the statements of those who consider alcohol a stimulant with those who consider it a paralyzer or narcotic. I think this drug, as clinical observation of many years has proved, is a most valuable stimulant, because when used in toxic doses it does produce other effects, constitutes no reason why he should cease employing it as a stimulant. Of course it has other effects; it has toxic effects; it has other effects in sepsis. Its dosage can not be given in drams nor in grams, for it is one of the remedies upon whose use the disease and the immediate condition of the patient have a wonderfully modifying influence.

DR. GROSVENOR—My chief object has been to show that experiments have been made which, to my mind, prove conclusively that upon the organs of special sense alcohol in these very small doses produces paralysis. By small doses I mean from half a dram to two dram doses. I am open to conviction if there is a scientific basis on which to prove that alcohol is a stimulant. Just because alcohol has, by our forefathers and great forefathers, been regarded as a stimulant, is no reason why we should regard it as a stimulant to-day. We are living in a new generation, and this subject of the action of alcohol on the human system has been revolutionized by men who are competent to experiment upon it and to carefully note the results.

SOCIETY PROCEEDINGS.

American Neurological Association.

Annual Meeting held at Philadelphia June 3, 4, 5, 1896.

The President, DR. F. X. DERCUM in the chair.

THE PRESIDENT delivered an address entitled

THE FUNCTIONS OF THE NEURON.

He dwelt at great length upon the various views advanced by Nansen and quoted several abstracts from this well-known author's work. Speaking of naked axis-cylinders, Dr. Dercum stated that they are in all likelihood a physiologic impossibility in the cerebrum; for were they numerous, we can suppose nothing but a constant overflow of stimuli from one cell to another, and consequent incoördination, not only of thought but also of action. This is the view advanced by Nansen. The speaker stated that the question had arisen in his mind as to whether the neuron was not an absolutely fixed morphologic element, and whether it did not possess a certain, though perhaps limited, power of movement. Continuing, he said: "Realizing the practical value and the wide application of this idea, I have examined the literature to see whether a similar interpretation of nervous phenomena has occurred to others, and to gather such facts, if any, as could be brought forward in its support. I found that this thought had occurred independently to three observers, one in Germany and two in France." Ramon Cajal, however, opposes the theory of the mobility of the neuron, and maintains, on the other hand, that the neuroglia cells possess a great deal of mobility. He points out for instance that the neuroglia cells of the cortex are at times stellate and at others much elongated. Their processes have numerous short arborescent and plumed collaterals.

Two phases can be observed in them, first a state of contraction, in which the cell body becomes augmented, while the processes become shortened and the secondary branches disappear, and secondly a state of relaxation, during which the processess of the neuroglia cells are again elongated. Ramon Cajal further maintains that the processes of the neuroglia cells in reality represent an insulating or non-conducting material, and that during the period of relaxation they penetrate between the arborizations of the nerve cells and their protoplasmic processes and render difficult or impossible the passage of nerve currents. On the other hand, when the processes of neuroglia cells are retracted, the various nerve cell processes which they formerly separated from each other are now permitted to come into contact. To me it seems as though Ramon Cajal admits the very thing against which he contends. Turning our attention for the moment to the subject of hysteria, we will see what a flood of light may be cast upon this hitherto so obscure and mysterious subject. Take the simple example of an hysteric paralysis and see how easily it may be explained. The neurons of a certain area of the cortex, for instance, retract the terminal branches of the neuraxis to such an extent that the latter are no longer in contact, or sufficiently near to the neurons in the spinal cord which supply the muscles of the paralyzed parts. When power is suddenly reëstablished in hysterically palsied limbs, it simply means that the terminal branches of the cortical neuraxes, previously retracted, are again extended so as to reëstablish the proper relations with the spinal neurons. It would be interesting indeed to follow out the ideas here brought forward in their application to the various phenomena presented by hysteria. Turning to hypnotism, we can see what a ready explanation it affords for the phenomena presented, and leaving this field entirely, we can see what an enormous value this interpretation of cortical action is for normal mental phenomena, taking for example the familiar instance of sleep. Numerous other ideas also suggest themselves in relation with the view here advanced, but time will not permit of my further discussing it.

Dr. James Putnam, of Boston, read a paper on

HEMORRHAGIC ENCEPHALITIS.

The author first referred to the literature of the disease. The principal symptoms of which are, 1, those described by Wernicke as due to hemorrhagic softening occasionally confined to the neighborhood of the third ventricle; 2, those described by Streumpfell and others as attending more diffuse lesion of the hemispheres; 3, those connected with hemiplegia in children, which may be due to a similar lesion involving the cortex, as Streumpfell formerly suggested. Osler has reported a number of cases showing that however grave the symptoms of this disease the outcome may be favorable. The author's case was that of a young boy who was attacked, two weeks after being ill with mumps, with paralysis of motion, of both eyes, deafness, coma and double optic neuritis. At the end of three months, however, he had recovered except for slight double vision and impairment of hearing. Ever since the illness he has been suffering from epileptiform attacks of short duration, but these attacks are gradually becoming less frequent. Reference was made to another case reported by the reader in 1892, where beside other serious cerebral symptoms, including double optic neuritis, temporary loss of hearing had also occurred. The cases reported by Osler were given in outline and the interesting fact noted that the cases referred to were like the one mentioned by Dr. Putnam, in children.

Dr. L. C. Gray said he would like to know if there was any retraction of the head in the case reported. His reason for asking was that some years ago he procured a book which gave an excellent description of what is now called homorrhagic encephalitis and the remarks therein impressed him very much. He stated that he saw during his first ten years of practice four or five cases, all of which terminated fatally. In many cases the diagnosis is difficult and the prognosis is unfavorable even when the cases have seemed to run such a subacute course that you might think they would get well. Many cases are not susceptible to diagnosis except at the autopsy.

Dr. B. Sachs said that the recognition of this form of encephalitis constituted a distinct advance in neurology. During the past year or two he had seen four cases, two in private practice which had terminated fatally and two hospital cases which recovered. One of the cases was hard to diagnose as to whether it was meningitis or encephalitis, but the one point on which he decided the case was that there was no tendency to coma. Encephalitis is a milder disease than meningitis, but the symptoms will vary very much. One of the cases seen by Dr. Sachs was interesting for the reason that the cerebral symptoms appeared the same day with the fever, the former lasting for four days. In the speaker's opinion many cases have doubtless been reported as meningitis which were really cases of encephalitis.

Dr. Putnam said that the prognosis in these cases was often very difficult to decide, and this view had been expressed by Oppenheimer. Fürbringer had mentioned that meningitis may be present with the encephalitis, in which case the differentiation would be difficult. Although some of the most violent cases have recovered, yet the repeated occurrence of coma is an unfavorable sign. If meningitis is present, bacteria will probably be there and the system will be flooded with the toxins and a great deal depends on how much poison is absorbed. The significance of retraction of the head probably is not known. He referred to a case of influenza in an elderly person who subsequently presented the symptoms of Jacksonian epilepsy on one side and he died at the end of the third day. Microscopically no lesion could be discovered, but the brain was edematous and here and there were areas stained yellow.

Abstract of paper by Drs. Jas. H. Lloyd and Joseph Sailer on a

CASE OF RAPIDLY FATAL CEREBRITIS RESEMBLING CEREBRO-SPINAL MENINGITIS.

The writers called attention to the fact that fulminating cases of the infectious diseases such as smallpox, scarlatina, measles, typhoid fever and spotted fever occur in which the diagnosis is exceedingly obscure and the disease is usually quickly fatal. These cases as a rule have their most marked symptoms in the nervous system. There is delirium passing into coma with depressed cardiac and respiratory centers, with high fever, and in the cases of the exanthema, often a purpuric or hemorrhagic eruption not always characteristic. These cases demand especially two things, first the determination of the exact effects upon the nervous system, and second, the determination of the microbe or toxic agent at work in any given case. The writers could only attempt the former study as the paper was not intended to deal with the bacteriology of the subject. The patient was a man aged 24 years who was taken suddenly with a chill followed by fever and intense cephalalagia and radialgia. The patient passed rapidly into a condition of delirium merging into coma. Third nerve paralysis supervened, and on the third day a copious purpuric eruption appeared. This eruption presented ecchymosis and on the hands lesions like erythema nodosum. Blood and pus were found in the urine and vomiting of blood occurred before death. The patient died on the sixth day. The autopsy revealed disseminated local lesions in the cerebrum, mid-brain, pons and post-oblongata. Some migrated leukocytes in the perivascular spaces, little involvement of the membrane and a diffused nephritis. From extensive microscopic research the writers were able to report a disseminated local cerebritis. The infection had invaded the brain by way of the connective tissue structures, blood vessels, etc., and the nerve tissues proper were invaded secondarily. From the clinical standpoint the case probably comes under the head of "spotted fever."

Dr. Osler regretted that there was not more detailed reference to the condition of the kidney and referred to the readiness with which the diagnosis in these cases may be made. He stated that only last year, had it not been for the correction of his former impression, he would certainly have made a diagnosis of cerebro-spinal meningitis in a case of typhoid fever.

Dr. J. J. Putnam stated that we may get the symptoms without the meningitis, it is certainly an addition to our clinical knowledge. To reinforce this fact may be mentioned that in diphtheria, although the characteristic symptoms had been present, some of the most recent observers had failed to find any lesion.

Prof. B. G. Wilder, of Cornell University, read a paper on

THE ECTAL RELATIONS OF THE RIGHT AND LEFT PARIETAL AND PAROCCIPITAL FISSURES.

The parietal and paroccipital fissures may be either completely separated by an isthmus, or apparently continuous. When so continuous ectally there may still be an ental and concealed vadum or shallow. Disregarding the vadum on the present occasion, the ectal relations of the two fissures may be designated as either continuity or separation. That continuity occurs more frequently on the left side, has been noted by Ecker, Cunningham and the writer. Hitherto, however, statistics have included unmated hemicerebrums as well as mates from the same individual. The following statement is based upon the cerebrums of fifty-eight adults of both sexes and various nationalities and characters. The speaker has examined forty-eight; the other ten have been accurately recorded

by Bischoff, Dana, Jensen and Mills. The four possible combinations of right and left continuity and separation occurred as follows:

1, left continuity and right separation in twenty-seven, 46.5 per cent.; 2, right and left continuity in twenty-two, 38 per cent.; 3, right and left separation in eight, 13.8 per cent.; 4, left separation and right continuity in one, 1.7 per cent. When five groups are recognized the combinations are as follows: A. In eight moral and educated persons, combination 1, 62.5; 2, 25; 3, 12.5; B. In twenty-three ignorant or unknown, combination 1, 56.5; 2, 34.8; 3, 8.7. C. In twenty insane, combination 1, 40; 2, 35; 3, 20; 4, 5. D. In four murderers, combination 1, 0; 2, 75; 3, 25. E. In three negroes, combination 1, 33; 2, 67. So far as these fifty-eight individuals are concerned, the most common combination, viz, left continuity and right separation, is decidedly the rule with the moral and educated, less frequent with the ignorant and unknown, the insane and negroes, and does not occur at all in the murderers. The only instance of the reverse combination (left separation and right continuity) is an insane Swiss woman. The only two known to be left-handed presented the more frequent combination 1.

These statistics suggest many especial queries and problems, some of which were briefly indicated. But the speaker wished this to be regarded as a preliminary communication, and asked the coöperation of other members in the effort to obtain satisfactory records of larger numbers, particularly of brains of well-born, moral and educated persons. For this purpose a blank form was outlined.

DR. THEO. DILLER, of Pittsburg, read a paper on

A CASE OF PROGRESSIVE MUSCULAR ATROPHY OF SUDDEN ONSET.

He related the details of a case which came under his observation three years ago, and stated that the sudden onset of palsy followed by atrophy and the absence of sensory phenomena led him to diagnose the case as one of poliomyelitis adultorum. The beginning of the patient's trouble was in an ophthalmoplegia. After an absence of two years the man again came under the speaker's care, when the atrophy and loss of power in the muscles had markedly increased. The biceps, triceps, scapular and ulnar groups had become involved and the finer movements of the fingers were lost, as was also the power of supination. At this time the patient was unable to put on or take off his clothing unaided. There was marked decrease in the response both to galvanism and faradism in the paralyzed muscles. Dr. Diller considered the case could be fairly regarded as one of progressive muscular atrophy, for the progressive feature was for two years the most important feature of the case. Ophthalmoplegia as a symptom of progressive muscular atrophy must be rare, for but scant references are made to it in literature. Strychnin had a very marked effect in staying the progress of the disease.

DR. WM. BROWNING, of Brooklyn, read a paper on

PITTING ABOUT THE HAIR CUPS; ATROPHIC CHANGE IN THE SKIN IN CERTAIN NERVOUS DISORDERS OF CENTRAL ORIGIN.

The author described a presumably hitherto unrecognized alteration in the skin. From seven or eight observations of such cases, he was able to give the limits of its recurrence. So far it has been seen only in progressive muscular atrophy of spinal origin, or any cases complicated with atrophy evidently due to cortical disease. In other affections attended by atrophy, such as infantile spinal paralysis, neuritis, pseudo-hypertrophy, etc., it has not been found. It is hoped that it may prove a useful help in differential diagnosis, especially between the forms due to peripheral and central disease. The change consists of an areola-like faint depression, frequently oval in the direction of the lines of the skin, though it may be irregular or circular in form about the exit of each hair. Usually the depression is a trifle paler than the surrounding skin, resembling, but not really being, a minute scar. It is not observed especially in hairy regions, like the scalp, but only over the seat of muscular atrophy, notably on the leg and thigh, although also on the upper extremity. All the cases reported had reached or passed middle life.

A CASE OF SYRINGOMYELIA, LIMITED TO ONE POSTERIOR HORN IN THE CERVICAL REGION, WITH ARTHROPATHY OF THE SHOULDER JOINT AND ASCENDING DEGENERATION IN THE PYRAMIDAL TRACTS.

By DRS. F. X. DERCUM, Philadelphia, and WM. G. SPILLER, Philadelphia.

Three years after a strain of the back the patient began to suffer from pains in the legs, a band-like pain about the lower part of the chest, weakness in the lower limbs and a spastic gait. Complete paraplegia with contractions, more marked on the right side, wasting of the lower limbs, paralysis of bladder and rectum developed later. Cutaneous sensibility was lost in the legs and upon the trunk as high as the nipple on the right side and a little above the umbilicus on the left. The sense of temperature was absolutely lost over the right arm, the right shoulder and the right side of the neck, and also upon the adjacent portions of the right side of the trunk above the nipple line. There was some analgesia of the right arm.

The right shoulder joint began to swell, and from rupture of the capsular ligament cellulitis with redness and local heat was produced, but with little or no pain. In extension the humerus assumed the position of a subglenoid luxation. Death was caused by exhaustion. At the autopsy the capsule of the right shoulder joint was found much thickened and roughened on the inner surface. The head of the humerus had disappeared, the bone having been eroded to some little distance below the surgical neck. A cystic tumor was found in the axilla, containing a friable fatty material. The surface of the glenoid cavity was much eroded, roughened and porous; it was abnormally large, and extensive bony deposit had taken place along its edges. The coracoid process exhibited a thick and firm accretion around its entire edge. Sections were made in the Pepper Laboratory from the level of nearly every spinal root and from many spinal ganglia.

By the microscopic examination degeneration was found of the crossed pyramidal tract as high as the substantia reticularis of the second cervical segment and of the direct pyramidal tract as high as the motor decussation upon the right side, and for a short distance of the crossed pyramidal upon the left. This was believed to be ascending on account of the following facts: 1, absence of any microscopic lesion above the medulla oblongata; 2, degeneration of the crossed and direct pyramidal tracts on the same side of the cervical cord, intense in the lower cervical region near the lesion and diminishing gradually in intensity in the cervical segments and finally becoming very indistinct in the upper cervical region; 3, absence of all degeneration in the anterior pyramids; 4, long duration of a chronic process.

While certain associative fibers may be considered degenerated in these columns, the entire antero-lateral column contains such fibers and the degeneration was notably in the area occupied by the crossed and the direct pyramidal tract. This ascending sclerosis is probably in greater part due to destruction of motor fibers deprived of their function.

Degeneration of the direct cerebellar tracts and of the tracts of Gowers was traced as far as the inferior peduncle of the cerebullum. Intense pachymeningitis was noticed from the second lumbar segment to the exit of the third dorsal roots. The arthropathy of the right shoulder was not due to any special changes in the cord or spinal ganglia. The posterior roots were not affected even where the pachymeningitis was most intense; the anterior at one part of the dorsal cord were degenerated. In the entire cervical region as high as the second cervical segment the cavity was limited to the right posterior horn. The gliosis extended from the extreme end of the conus terminalis to the second cervical segment. The microscopic examination explained satisfactorily the symptoms observed in life.

DR. HENRY S. UPSON asked if the degeneration was in the lateral column. In his opinion the degeneration might be susceptible of examination in two ways, first, that the short fibers might be effected by a lesion, and, second, that the degeneration might be in consequence of or merely coincident with the syringomyelia. The particular point is whether this can be made out to be an ascending degeneration.

DR. JAMES HENRIE LLOYD referred to the ease with which a diagnosis of syringomyelia can now be made. He referred to a case reported by himself in 1892 in which there was distinct arthropathy of the left ankle joint and there was also some ascending degeneration of the lateral tract.

DR. B. SACHS referred to the great variability in the symptoms if the cases are watched for a considerable length of time and stated that during the further course of the disease a number of the sensory symptoms will disappear, so that sometimes cases of syringomyelia will exist in which there is almost complete cessation of sensory function.

DR. M. A. STARR—Although admitting the ease of diagnosis, he gave the details of a case under his own observation in which he was undecided whether the patient was suffering from syringomyelia or hysteria. Judging from the objective symptoms he thought she had syringomyelia, but other than that it seemed to be a clear case of hysteria.

DR. J. J. PUTNAM referred to an interesting case of syringomyelia in which the disease began in the dorsal region. The patient's condition was much improved by an operation performed by Dr. Keen at the request of Dr. Putnam under the impression that there might be a tumor under the cord. The

cord was found enlarged and discolored as though it had been the seat of a tumor, but no tumor was found. He referred to the difficulty often experienced in diagnosing the disease in children.

Dr. Hugh T. Patrick observed that the direct cerebellar tract was not traced as high as the pons and said he thought it would give a false inference if it was not mentioned, that it extended this high. Personally, he traced it to the corpora quadrigemina. He referred to a case of this disease which had gone the rounds of London hospitals for years as a case of hysteria. He also stated that the French have called attention to the fact that syringomyelia and hysteria are particularly liable to be combined and they have also described acromegaly combined with syringomyelia.

Dr. Spiller stated that the degeneration was distinctly marked in the direct and crossed pyramidal tracts. The degeneration was the most extreme near the lesion and decreased gradually in ascending so that at the upper part of the cervical region it could hardly be found. As to the loss of tactile sense the symptoms vary according to the parts destroyed. If the posterior columns are destroyed, the tactile sense must be destroyed also.

(To be continued.)

Medical Society of the State of Delaware.

One Hundred and Seventh Annual Meeting held in Newark, June 9, 1896.

The President, Dr. James T. Massey, occupied the chair and there were about fifty members present.

Dr. H. G. M. Kollock made the address of welcome and called the attention of those present to the many important discoveries of medical interest during the past year. He made special reference to the Röntgen rays and said he hoped this would be but the beginning of a practical method to view all the organs of the body.

Dr. A. T. Neale read a paper entitled:

CONTAGIOUS DISEASES OF THE LOWER ANIMALS AND THEIR RELATION TO THE HUMAN FAMILY.

The author called attention to the fact that under the revised code of the Delaware laws the Governor has the power to proclaim an epidemic of disease among cattle, to forcibly take and kill live stock and take every precaution to protect the lives and property of the public without any recompense to the individual loser. Severe as this law appears to be, it is almost inoperative, for the live-stock owner quietly removes his dead, suppresses his suspicions, and an epidemic is established upon his own and the adjoining farms. If the present laws are practically inoperative, from their failure to recognize the rights of individual sufferers, if this Station can legally acquire and circulate the information which makes the recognition of said interest possible, then it is clear that the present laws should be so amended as to give permission to the Governor to employ State funds in the interest of the individual, just as he is now empowered to use them in the employment of the sheriff for the protection from such epidemics.

Dr. Black believed that about 20 per cent. of milk cows are tuberculous and that many of the summer complaints of children were due to this cause. He advocated the sterilization of milk and stated that it should be brought to the boiling point a second time.

Dr. Neale in closing stated that out of 1,000 cows examined in one year, 19 per cent. were found tuberculous.

Dr. James H. Wilson read a paper on

THE SOURCE AND CAUSE OF THE IRREGULAR FORM OF MALARIA.

The author stated that the term is synonymous with swamp or ague poison. Aitken speaks of paludal and of animal malarial poison and says that this toxic poison is capable of inducing certain morbid phenomena, known as intermittent and remittent fevers. Thayer and Hueston have reached the conclusion that the tertian type of fever depends on the presence of a parasite in the blood, which passes through its cycle of existence in about forty-eight hours. In regard to the estivo-autumnal fever, the same authors conclude that it is due to the organism described by Marschafva and Selly, but the existence of this parasite has not been followed out in a satisfactory manner. The main seats of infection are the spleen, bone marrow and internal organs. Dr. Wilson believes that the mode of infection of irregular forms of malaria are identical with those of the regular forms and that the admission into the system is similar. The typhoid malaria referred to by Dr. Woodward during the late Rebellion was typhoid fever complicated with malaria and this affection has been placed where it properly belongs by the clinical thermometer. The two factors necessary to the production of malaria are water insaturation with protracted heat. The speaker narrated an instance which proved that the malarial parasite existed in drinking water poth pure and impure.

Dr. Judson Daland, in discussing this paper, stated that while many cases, and probably the majority, are transferred to individuals through water, unquestionably many are carried through the atmosphere. Out of sixty or seventy cases studied by the speaker, 80 per cent. were of the ordinary variety. The speaker believed that many cases of malaria were instances of double infection, at the time the malarial intoxication was acquired another parasite was also taken.

Dr. Wm. C. Pierce of Wilmington read a paper entitled

MALARIA WITH SPECIAL REFERENCE TO SOME OF ITS IRREGULAR FORMS.

The author spoke of the geographic distribution of malaria in the United States and Europe. He referred to the effect of the soil in producing malaria and stated that several species of the plasmodium may coexist and produce the varying types of the disease. He called attention to two cases of malaria which developed many years after they were supposed to have been cured and one case was especially interesting from the fact that it occurred five days after the termination of labor, the woman having had no malarial symptoms for some years previous.

Dr. C. M. Ellis referred to the fact that malarial poison passes through cycles the same as many other diseases. He demonstrated this by mentioning localities and time of the recurrence of malaria.

Dr. Judson Daland referred to the few cases in Pennsylvania as compared with the number seen in Maryland and surrounding country. It has been proved by Dr. Thomson of New York that typhoid may be complicated by malaria. Referring to the question of malarial cycles, Dr. Alfred Stille of Philadelphia formerly said the same thing at the time the malaria was prevalent along the Schuylkill River years ago.

Dr. R. G. Ellegood stated that many years ago when remittent fever was prevalent he had seen eight or nine persons suffering at the same time out of a family of fifteen. None of the cases presented any typhoid symptoms, but were typical cases of remittent malaria.

Dr. R. B. Hopkins read a paper entitled

THE TREATMENT OF MALARIA.

The author said in his opinion the reasons for this disease not being as prevalent as formerly are due to atmospheric changes, improved condition of the soil, better drainage and purer water supply.

Dr. Daland in referring to the diagnosis of malaria stated that the one pathognomonic sign of this disease was the existence of the malarial parasite. It lives forty-eight hours and during this time completely changes its appearance. It will enter a red blood cell, feed upon the contents and increase in size at the expense of the stroma. Nothing resembles this appearance in health or disease and the diagnosis of malaria is complete so soon as this parasite is discovered. Dr. Daland then referred to the theory that the rupture and disintegration of this body in the blood is coincident with the occurrence of the chill.

Dr. Marshall reported a

CASE OF PERNICIOUS ANEMIA.

In this instance the diagnosis was difficult to determine between leucemia, Addison's disease and pernicious enemia. The patient was a bank teller, 33 years of age, who had a pulse of 120 and a temperature of 102 degrees when Dr. Marshall was called. The blood count at this time showed 1 white to 235 red, the red then numbering about 1,300,000. The diagnosis of pernicious anemia being thus confirmed, the patient was placed upon red bone marrow and arsenic and in a few weeks the red blood corpuscles numbered 2,500,000. In two weeks the count showed 3,500,000, and two weeks later 3,800,000. Three months afterward the count showed 4,400,000. The man continued to improve and is now back attending to his duties in the bank.

Dr. C. M. Ellis read a paper entitled

OBSTETRICAL COMPLICATIONS.

The author called special attention to the great danger of the convulsions of pregnancy before term. His experience included eight cases, occurring at different stages of pregnancy and showed clearly that when a convulsion occurs before term, unless it is of systemic origin, immediate delivery is imperative, without regard to the presence or absence of uterine contractions or the condition of the os as to dilatation. If the convulsion begins early, the uterus should be emptied by the most expeditious method and all medicinal treatment should be secondary to this one great object. This is necessary for the reason that the percentage of fatality from eclampsia is fully

50 per cent. This high death rate is greatly exceeded when the delivery is not accomplished or if it is delayed until several convulsions have occurred or until uterine contraction and dilatation have supervened. Of the eight cases seen by the author, five died and three recovered. Of the five that died premature delivery was effected, one on the sixth day after the initial convulsion, one forty-eight hours after, one eighteen hours after the first convulsion, three others having followed and the patient being moribund at the time and one lay in convulsion three days without any attempt at delivery. The experience gained from these eight cases would certainly justify premature delivery.

DR. ELLIS had never seen a death occur before delivery after the operation had been initiated and he believed the uterus should be evacuated immediately after the first convulsion. When albumin appears in the urine the more imminent is the danger of eclampsia and if this accident is threatened, it may be necessary for the attending physician to hasten delivery without waiting for the convulsive seizure. The speaker denounced the indiscriminate use of morphia hypodermatically in cases like these.

DR. GEO. M. BOYD of Philadelphia—As to the treatment from a medicinal standpoint, he recommended chloral by the rectum. He believes the mortality depends largely on the kidney lesion, as many cases of eclampsia during labor are the result of interstitial nephritis before pregnancy.

DR. P. W. TOMLINSON of Wilmington, mentioned a case in which twenty-four ounces of blood were drawn and decided improvement followed.

DR. E. S. DWIGHT read a paper entitled

CARDIAC DISEASES AS ENCOUNTERED IN CENTRAL DELAWARE.

He said that frequently commencing heart lesions were evidently due to the absorption of some morbid product through the abraded service of the bladder. He believed the ulcerative endocarditis had been the cause of death in one of his cases of eclampsia and he is of the opinion that where ulcerative endocarditis can be recognized before embolism has occurred, it is important that the patient should be kept in a recumbent position and as quiet as possible.

DR. H. J. STUBBS of Wilmington read a paper entitled "Three Cases of Appendicitis, one of Unusual and Fatal Complication," in which he related the details of the three cases and stated that a pin had been found in the appendix of one of the cases. He strongly recommends prompt medical and surgical treatment.

WM. P. ORR of Lewes was elected president; WILLARD SPRINGER of Wilmington, vice-president; P. W. TOMLINSON of Wilmington, secretary; and Wm. C. PIERCE of Wilmington, treasurer for the ensuing year.

The society adjourned to meet in Rehoboth in June 1897.

Medical Society of the State of Pennsylvania.

Forty-sixth annual Session of the Medical Society of the State of Pennsylvania, held at Harrisburg, May 19 to 21, 1896.

(*Concluded from page 1227.*)

At the afternoon session Dr. Judson Daland of Philadelphia, read a paper illustrated with lantern slides, "Certain Forms of the Malarial Parasites."

DR. L. J. LAUTENBACH of Philadelphia, read a paper,

PHONO- AND PNEUMO-MASSAGE FOR SUPPURATIVE DISEASE DEAFNESS.

In cases of middle ear suppuration there are three aspects from which the subject of the treatment must be studied. The first of these is the prevention of the inflammation: the second which is to some extent included in the first, is the subjection of the inflammatory condition and the healing of the diseased parts, while at the same time stopping the ear discharges; the third, is to some save the hearing or to restore it when impaired. I hope in this paper to so present the subject of massage as applied to suppuration cases, that you will be convinced that in connection with our older and well tried remedies, it is a valuable aid in treatment, but there is a sphere which it more thoroughly fills than any other remedy or remedies. In all cases of suppuration, acute or chronic, it is necessary to cleanse the ear as thoroughly as possible of all retained secretions. There is no doubt that if the middle ear cavity were kept constantly clean, the inflammatory condition would often subside very quickly. To remove these discharges, I use my pneumo-massage instruments in connection with wet or dry cleansing. I first treat the ear according to the present methods and when I consider it fairly clean, I use an exhaust apparatus with a pressure of from 2 ounces to 4 pounds per square inch for from 3 to 10 minutes, employing about 300 exhausts per minute. Then I again thoroughly cleanse the ear with cotton and if I am at all suspicious of there being more suppuration present, I again apply the exhaust pump. After thus cleansing the ear, I use drying and stimulating preparations in the usual manner. Often in simple cases after cleansing the ear, I lightly plug with cotton using no other treatment. Pneumo or suction massage thus applied fulfills in part all three of the treatment indications, preventing the extension of the disease, favoring the subsidence of the inflammation and improving or saving the hearing. It accomplishes these three indications by the complete cleansing occasioned and in addition, the last of these by the thorough kneading movements produced in the conducting apparatus, preventing loss of functional activity and relieving pressure on the internal ear. We can by means of suction massage thoroughly applied (often and sufficiently long) break up these anchyloses, stretch and cause absorption of the bands, break the adhesions and often reduce the thickenings and growths of the mucous tissues and heal the ulcerations. By bringing about these results we succeed in restoring to the conducting apparatus its normal function. During this process we usually succeed at the same time in relieving the abnormal pressure on the internal ear. By the use of phono-massage we can, as elsewhere pointed out, stimulate the auditory nerve ends to renewed activity. I no longer tell my patients that as the discharge ceases the hearing will probably grow worse. I no longer find it to be so. I find the hearing almost invariably to improve as the treatment progresses. Of course, under the old method the hearing often did grow worse; no effort being made to prevent the organization of the exuded lymph; there was an entire lack of any treatment employed to overcome the bad effects of the abnormal healing processes; the ossicles became anchylosed, and adherent to adjacent structures; the drum head formed attachments; nothing was done to prevent the stapes being jammed into the oval window; no steps were taken to prevent adhesions, nor was it considered necessary in any way to normally stimulate quiescent auditory nerve endings. In fact, all that was done to soothe, cleanse and heal the ear was perhaps the occasional use of the Politzer inflation. My method provides for the relief of all these conditions and by a rational common sense treatment endeavors to overcome all, and I am satisfied that it does so measurably well, as my results to-day are infinitely better than before its introduction. The results both as concerns the cure of the suppuration, the length of time required therefor, as well as in the degree in which I succeed in restoring the hearing being conclusive proofs in this direction.

My conclusions are briefly as follows: Pneumo-massage aids in the prevention of extension of inflammation as well as in the subsidence of the inflammatory action through the aid it affords by thoroughly cleansing the middle ear of all the discharges, thus relieving the excessive tension, thus preventing infiltration and disintegration of ear structures with consequent extension to the internal ear or mastoid cells or both. Pneumo-massage preserves intact the normal sound conducting structures and restores them when anchylosed or abnormally attached or when restricted in their movements to a condition more nearly natural than can be attained by any other method. Pneumo-massage relieves the increased pressure on the internal ear so often observed as the cause of deafness in these cases. Phono-massage restores, at least in part, to the internal ear structures their normal receptiveness by occasioning a physiologic stimulation of the nerve endings and their connecting parts which had either from disuse or increased pressure been placed in a dormant or non-responsive condition.

DR. E. W. HOLMES of Philadelphia, read a paper, "Cerebral Concussion and Compression," with a report of a case trephined.

DR. ERNEST LAPLACE of Philadelphia, read a paper on "Surgical Treatment of Insanity," with a report of cases. Both these papers showed good results from the operative procedure.

The committee on the Jefferson Medical College Hospital reported that they had learned that the advertisement had been published without the knowledge of the gentlemen whose names appear and it was their belief that the matter having now come to their notice would be so arranged by them as to fully comply with the Code of Ethics. The committee deprecated the action of persons who by having copies of the advertisement printed and distributed in the hall of this Society had made it appear to have more the interest of the individual than the welfare of the Society. The report gave much satisfaction and was adopted with few dissenting voices.

DR. A. O. J. KELLY of Philadelphia, read a paper,

THE SIGNIFICANCE OF MURMURS IN THE DIAGNOSIS OF VALVULAR DISEASE OF THE HEART.

The study of the exact significance of murmurs in the diagno-

sis of valvular disease of the heart may not inappropriately be prosecuted by arranging our cardiac cases into three distinct classes: 1, cases in which the presence of a murmur assists in the diagnosis of some valvular lesion; 2, cases in which, despite the presence of a murmur, valvular disease may not be diagnosed; 3, cases in which valvular disease may be diagnosed without the detection of any murmur whatever. The actuating motive of the communication is therefore that a murmur alone, that is, without corroborative evidence, is never diagnostic of any valvular lesion of the heart. We must always precede our examination of the heart by a thorough physical examination of the lungs and pleuræ. Considering murmurs we must determine the murmur to be of endocardial origin, eliminating all question of exocardial genesis. The so-called mitral systolic murmur at the apex is usually considered diagnostic of mitral incompetency. But a similar murmur in the same area may be due to anemia, or be of cardio-pulmonary origin. And the murmur of mitral insufficiency may be heard with greatest intensity up toward the pulmonary cartilage. The organic murmur, as well as the inorganic, is subject to postural influences and in certain conditions may be absent. The apical diastolic or presystolic murmur of mitral stenosis is neither as strictly localized to the apex, nor as pathognomonic of the condition as is generally supposed. A presystolic murmur at the apex may not only be due to a mitral stenosis, but may likewise owe its origin to an aortic incompetency or an adherent pericardium. A mitral stenosis may frequently be diagnosticated without the detection of any murmur whatever, especially when there is heard a reduplication of the second sound at the apex and not at the base of the heart. Exercise care in the diagnosis of single lesions at the mitral orifice, they are of rather infrequent occurrence. The aortic diastolic murmur of aortic insufficiency may be mistaken for a transmitted bruit from the veins of the neck, and may often be absent, or if present be accompanied by an aortic systolic murmur without there being present any aortic stenosis whatever. An aortic systolic murmur is not diagnostic of aortic stenosis. In making a diagnosis of any valvular lesion we must demonstrate the physical signs other than the murmur which attend upon the lesion; hypertrophy and dilatation, accentuation or absence of the normal heart sounds at the apex and base, pulse, examination of the veins, auscultation of the arteries, etc. This pertains to valvular disease of the right as well as of the left side of the heart. Because of the complexity of the conditions in cases of combined valvular disease the diagnosis is more difficult, but is based upon similar principles. It is not the character of a murmur, nor its area of distribution, nor its direction of transmission, that determine its value in the diagnosis of valvular disease. These are subordinate to the time of its occurrence and the site of its production. Murmurs are usually present in cases of cardiac valvular disease, so also is albumin present in the urine in the event of nephritis, but neither is pathognomonic of the condition which they attend, they both require confirmatory evidence. We must devote more attention than is usually accorded to the other and important physical signs of valvular disease of the heart. The murmur is but one element in the diagnosis, the least important.

Dr. W. T. English of Pittsburg, read a paper,

THE ABUSE OF DIGITALIS.

A vague idea exists that this drug is a cure for heart disease, hence the abuse in its employment. Much variation exists as to the dosage owing to the variety of forms, now the tincture, now the infusion, the powdered leafs, etc. The tincture should be employed for its tonic effect. The infusion is a diuretic. Both may be combined. The objection to the leaves is that they are not readily assimilated. It is employed indiscriminately as a diuretic in Bright's disease. It is often forgotten that its effects are slow in coming as well as deliberate in leaving. It is fool-hardy to use it in chronic nephritis accompanied with high peripheral pressure. It is forgotten that in moderate doses it stimulates the musculo-motor portion of the heart, increases the action of the inhibitory apparatus, etc. In those whose vocation forces them to the extreme of exertion, the heart becomes muscular in proportion. Such use of digitalis is a sin against the heart, a goad to a loaded organ. In palpitation due to neurosal conditions its use may convert it into an incurable disease. One fault is to give it without telling the patient to abstain from exercise while under its influence. Such persons should live in perfect physical and mental quiet. In malformation it is contraindicated. In mitral regurgitation there is a time when it is valuable.

Dr. W. Reber of Pottsville, read a paper,

THE CORRELATION BETWEEN THE IRIS AND THE PATELLAR REFLEX TENDON.

He considered the frequency of association of the iris and the patellar tendon reflex, especially in tabes. It will reflect the different views as to the nature of the true primary lesion in tabes, thereby also considering the lesion that brings about joint and frequently coincident involvement of both these reflexes. In this way we hope to show that the original change is a vascular one, setting up a starvation process in consequence of which the cerebro-spinal activity is obtunded (a condition not infrequently observed in tabes), and abolition of the iris and patellar reflex natually follows.

The President then thanked the Society for the many courtesies which had been accorded him while in the chair and appointed Drs. McCandless and Detwiler to escort the President elect to the platform.

Dr. E. E. Montgomery of Philadelphia, then assumed the chair as President and thanked the members for the honor done him in this election.

Dr. B. A. Randall of Philadelphia, read a paper,

SIMPLE AND EFFICIENT TREATMENT OF CHRONIC CATARRHAL DEAFNESS.

These cases are the reproach of aural surgery. To many, ear diseases appear an unknown and unknowable land. These are one-third of the surgeon's work. In the majority decided gain will follow rational treatment, no elaborate apparatus is needed. The naso-pharynx from which the affection proceeds must be gotten into better condition. Vigorous spraying with an alkalin fluid as Dobell's in the hand, atomizer cleanses the vault, then mopping the region of the mouth tubes, etc., with the bent applicator charged with glycerole of tannin or of iodin. An oil spray can follow with advantage, say menthol-camphor 1 to 2 per cent. This gives a protecting coating to denuded surfaces and medicates the cavities with a stimulating disinfecting vapor and lubricates the nose for the easy passage of the catheter. Massage with the pneumatic speculum should complete the process. The possibilities of harm are at a minimum and a year will show decided benefit. Often patients with a record of no benefit, have gone ahead most flatteringly under this and he had found old cases of his own give evidence of its potency.

All the papers, of which there were quite a number which had been omitted for want of time, were on motion declared as read by title and referred to the committee of publication. Votes of thanks were adopted to all who had aided in making the meeting so enjoyable. A motion was adopted for a committee to report as to the advisability of meeting every 2nd or 3d year at Pittsburg, Philadelphia or Harrisburg and to found a museum and library for the State Society. The History of the Society ordered to be prepared last year by the secretary was called for and the secretary announced that it would be ready and be printed with the Transactions. The State Board of Medical Examiners asked permission to print its report of those licensed in the Transactions. Granted.

The President appointed to prepare the addresses for next year: On Medicine, Dr. W. E. Hughes, Philadelphia; on Surgery, Dr. J. Chalmers DaCosta, Philadelphia; on Obstetrics, Dr. J. M. Baldy, Philadelphia; on Hygiene, Dr. A. P. Brubaker, Philadelphia.

The Society then adjourned to meet in Pittsburg, third Tuesday in May, 1897.

Kentucky State Medical Society.

(Concluded from page 1232.)

Forty-first Annual Meeting, held at Labanon, June 10-12, 1896.

First Day—Evening Session.

The President, Dr. John A. Lewis of Georgetown, delivered the President's annual address. He referred feelingly to the honor conferred upon him by his election to the presidency by his confrères, and extended a warm welcome to the brilliant audience assembled. He stated that while casting about for a subject for discussion he happened to read of that old-fashioned doctor in Bonnie Briar Bush, by Ion Maclaren, and he chose the "Prolongation of Human Life." Life must surely be lengthened by the right way of living. Three questions are to be propounded: 1. Is it desirable to prolong life? The "mugwumps" of life pity that class who answers, "No," to this question. Accompanied by decrepitude prolonged life would not be desirable. A most potent reason for desiring prolonged life is wisdom. William E. Gladstone is the best living example of this reason. When he speaks the world hears and profits. Emperor William I. of Germany, a magnificent personage, unified Germany by wisdom and arms and lived 91 years. Robert Louis Stevenson, the gifted fiction writer, whose young life went out in Samoa where he went for life, was glad to live for the living. A mind of treasure was lost with the

death of Pasteur. Whatever is true of all these may be true of everyone no matter how humble. Why is life so short? What a vast difference between the limit of Moses' time and our three score years and ten! We are violators of laws of health in ten thousand different ways. What part has disease played in shortening life? It is not sent by divine source to harass mankind. Nearly all are caused by man's own violation of laws. Specific diseases sprung from long existing unhygienic surroundings, and man is largely responsible for existence of disease. How far is heredity responsible for disease existing? Robust health is transmissible from father to son; on the other hand the tendency to tuberculosis, etc., being transmissible, is indisputable. Scarcely one of us can boast a clean bill of health and this is due to heredity alone. This can and should be prevented. It is beyond law, but not public opinion. Heredity should be talked of from pulpit and in the home; the iniquities of transmission to three and four generations. Can any agencies lengthen life? Man can do everything to prevent disease. Cleanliness surely is next to godliness. Pure air and water, employment and reaction, rest and exercise, are all essentials. Dead must be cremated, dwellings properly ventilated; people will live longer out of doors than in crowded dwellings. There is no health without pure water; it should be filtered. Live abstemiously. Man is a reckless eater: 80 per cent. eat twice as much as required to live. Whisky and tobacco are both to go. Our habits of life must be modified till men do not wear their lives out trying to live. Gospel of long life should be heralded by every means possible; by press, pulpit and people. Physical culture and physiology should be recognized in all schools. Our State Board of Health has done great work for our State health. Gladstone said: "Medicine is the most progressive science in the world." Physicians must mold sentiment, as such and as philanthropists, but must demand in return the support and confidence of the people.

DR. J. B. MARVIN of Louisville, delivered an address upon

CONTAGIOUS AND INFECTIOUS DISEASES.

There has been a steady progress upward and onward. We know more of hygiene than formerly. This is a microbe age; people are sick about them. The vast majority of microbes are harmless; many are of the greatest good. The few that are harmful can be counted on the fingers; but they are very harmful. They are not bugs; far from it. The newspapers have ridiculed germs under this name. The laity are to be instructed by the doctor in regard to the life history of germs, and in turn are of great help to the doctor. Seed, soil and season are necessary for the growth of all germs, the sum and substance of the teaching of modern medicine. In speaking of consumption he described the organism, the seed and the soil. The ladies can inaugurate a reform in the iniquitous habit of spitting. Stop promiscuous kissing of children; be a great help to the doctor. Bring public opinion to bear upon carriers, steamboats and railroads. Become nose breathers, for the nose is a great filter. Typhoid fever is an eminently preventable disease; what a source of evil is an infected water supply. Not so much bad air, but bad water is very frequently responsible for malarial fever. Diphtheria is frequently a disease of neglect. Proper inspection of throats, breakage of slates, stoppage of common drinking cups in schools, Sunday schools and public places. The best disinfectant is fresh air and plenty of it, and likewise sunlight. Like sin these organisms like darkness and flourish there.

SECOND DAY—MORNING SESSION.

DR. HENRY E. TULEY introduced the following resolution:

WHEREAS, Resolutions concerning vivisection were passed by the AMERICAN MEDICAL ASSOCIATION at Atlanta, therefore be it

Resolved, That the resolutions mentioned and published in the JOURNAL of the AMERICAN MEDICAL ASSOCIATION express the sentiments of the Kentucky State Medical Society and that our secretary be requested to send copies of these resolutions to the senators and representatives in Congress from our State. On seconding by Dr. J. A. Larrabee this was unanimously passed.

Delegates from the Kentucky State Pharmaceutical Society were received and invited to a seat on the platform.

A communication was read from the secretary of the Mississippi Valley Medical Association, inviting the members of the State Society to the meeting of this Society at St. Paul.

A communication was received from Surgeon General Sternberg requesting action by the State Society on vivisection covered by the resolution offered by Dr. Tuley.

Committees were appointed by the President on Necrology and upon Legislation to influence the legislature in behalf of the anti-abortion law.

A report was received from the committee appointed at the last meeting to "Collect and Codify" the Constitution and By Laws of the Society. On ruling of the President, as the Committee had revised the Constitution contrary to the resolution by which the committee was appointed last year, the discussion was deferred one year.

DR. W. H. WATHEN of Louisville, opened the discussion on hysterectomy by reading a paper on

VAGINAL HYSTERECTOMY.

In support of this method the following reasons were offered: 1. There is less shock and more rapid and complete convalescence, the patients usually sitting up within a week and walking a few days later. 2. In pelvic suppuration there is less danger of septic infection from soiling the peritoneum. 3. Absence of suture or mural abscesses and of sinuses following the use of drainage or infected ligature. 4. Immunity from ventral hernia. 5. A lower mortality, fewer post operative complications, and a more complete restoration to health in a relatively greater number of cases.

DR. A. M. CARTLEDGE of Louisville, read a paper on the opposite operation,

SUPRA-PUBIC.

Each method has its indications and limitations. The most perfect operation is that which the most perfectly removes the pathological condition, other things being equal. If to leave diseased ovaries and fragments of pus tubes, or one ovary or the shell of a diseased uterus after the heart has been dug out or cut is perfect surgery, and surgery that will stand the test of time, then statistics of vaginal hysterectomy show better results than the abdominal method. The combined method in many cases is indispensable. Abdominal hysterectomy finds its only objection in the fact that it entails an incision through the abdominal wall. In myomatous tumors amputation is done at the cervix. If infection is present the entire organ is removed. Drainage by the vagina. In case of growths, the small button of cervix is cauterized and dilated from above and a small strip of gauze carried through to drain the dead space resting between the closed peritoneum above and the otherwise closed cervix below.

DR. LOUIS FRANK of Louisville, read a paper on

OPERATIVE PROCEDURES FOR PELVIC INFLAMMATION.

In all operative work aim must be to obtain the best results to the patient, sacrificing as little as possible and to do this with the least possible danger. A thorough knowledge and appreciation of the pathologic processes which occur in the pelvis, with the changes resulting when these processes have run their course, is essential in order to properly appreciate the condition with which we have to deal. The operation of vaginal hysterectomy and vaginal celiotomy for pelvic disease has come to stay. With many it is a fad. The indications however for the vaginal operation should be and are secondary to those for abdominal section. A complete operation by the vaginal route is difficult as adhesions are left behind, portions of tubes, etc. Sacs fill up if left after this operation. When quick convalescence is spoken of it is only of surgical convalescence, never allow them to get up before end of second week. Sequelæ more frequent after vaginal operation. More cases of fecal fistulæ and of vesical fistulæ; complications often go unseen. Ureters are often ligated and clamped. Hernia should not occur in properly closed abdominal wound, herniæ do occur after vaginal operation, and which is easiest to treat. This operation is to be preferred in some cases, chief of which is the septic condition following puerperal cases. Other cases are best treated by combined method.

DISCUSSION.

DR. L. S. MCMURTRY of Louisville—The correct position is midway between extremes. The pelvic operation is not a new one; Battey practised it in his first operations, and pelvic surgeons have never discarded this route as a mode of attack. This is especially true of severe cases which will not permit thorough operation by abdominal route; drainage is obtained through the vagina. It is necessary in pelvic surgery to do the operation by the method which obtains the best result; where there is the greatest preservation of structures compatable with good surgery; and to do that operation which will result in a complete cure not making it necessary to do an additional operation. The field for the vaginal operation is in conditions of inflammation of pelvic organs, not for fibroids; also in post puerperal cases where the uterus is septic and the surrounding tissues also, which is quick in development. The vaginal operation has been introduced into this country as a fad, and has been carried to an extreme as was the operation for ovariotomy when first introduced. The great advantage in pelvic surgery is knowing what has been done and to treat the convalescence

intelligently. No abdominal surgeon can indicate with precision what is the condition. When any organ is taken out by the vagina it is taken for granted that it is all out, that all pools of pus so often walled in by intestinal adhesions, are evacuated. Asepsis is more difficult to maintain as the field is between two sewers of the body and the bladder and rectum are more frequently injured. The majority of operators say that the abdomen had to be opened before the operation was completed. There is a field for the vaginal operation, but it is a narrow field.

Dr. W. C. Dugan of Louisville—If much fixation is present the abdominal route should be selected. Can not tell where the adhesions are located when operation is done from below, one is working in the dark. Often have to leave an ovary or portion of one and the operation is not complete. The patient must be left for a second operation or a combined one done. The pus in ordinary gonorrheal pus tubes in 90 per cent. of cases is innoxious. The patient after any operation, either abdominal or vaginal, should stay in bed two or three weeks, and if this was insisted upon there would be fewer cases with an infiltration in the broad ligament. Time is not a factor and this argument should not be used. With the clamp, accidents do occur; they slip if put on high up.

Dr. W. H. Wathen said that two years ago he was as much opposed to vaginal hysterectomy as they who had opposed it in discussion. The same objections would not be urged if these men would do the operation. He had wounded the intestine above but once.

Dr. A. M. Cartledge stated that he expected to see the men retreat and the pendulum swing in the other direction. It is almost suicidal to allow these patients to get up in ten days after the operation. Fecal and urinary fistulæ is much more common in vaginal operation because one can not see work done, it is in the dark.

Dr. Louis Frank said that none opposed the operation of vaginal hysterectomy, but it was to the indiscriminate use of it. In sub-peritoneal fibroids there is no use of doing a hysterectomy as it can be removed by doing a myomectomy.

Dr. M. F. Coomes of Louisville exhibited a case upon which an operation of gastrostomy had been done, the tube being still in situ. The child had swallowed lye, a stricture resulting, for six days it had not swallowed anything. It was fed by rectum for twenty-four hours preparatory to operating. The valve operation was done and there never was any leakage until two weeks ago, when after playing violently the tube had been misplaced. The child can swallow milk and water, a little at a time now. No dilating of the esophagus has been done.

Here followed a paper by Dr. R. B. Gilbert of Louisville, on

THE CARE OF PREMATURE INFANTS.

Statistics show 20 per cent. of infants born at sixth month have survived; 35 per cent. at seventh month and at eighth month 85 per cent. It is too often the custom to turn premature infants over to old women, without any attention. A physician is inexcusable if he allows a premature infant to die from sheer neglect. To preserve their life especial attention must be paid to the maintenance of bodily temperature, proper feeding, prevention of injury by handling. Maintain temperature at 100 degrees, evaporation of moisture goes on from body no matter how closely wrapped in cotton or clothing. Incubator is best method of maintaining bodily temperature. The one recommended consists of two tin boxes, with two inch space between for warm water. Water heated by coal oil lamp placed under small copper water box connecting with water chamber by small pipes. The top of the box is open to allow infant air and light. Any tight box may be improvised. Feeding is important, mother's milk best; gavage may be used. A mixture which has proved successful in author's hands is as follows:

Sweet milk, fresh	℥ ij	60
Cream, fresh	℥ iij	90
Warm water sterilized	℥ x	300
Sugar of milk	℈ j	4
Common salt	℈ j	1 30

Above diluted for premature infant. Anoint infant after birth with warm lard, vernix to be wiped off; no water used at first cleansing. Premature infant not washed until three weeks of age.

Dr. Arch. Dixon, Henderson, reported

A CASE OF PLACENTA PREVIA.

The patient was six months pregnant, had a severe hemorrhage, a placenta previa was found, the membranes being intact. She had had two previous attacks of bleeding. Membranes were ruptured, feet brought down and after coming head delivered by short forceps. The mother rallied and made a good recovery. The fetus was living though asphyxiated. It was eleven inches long and weighed a fraction over two pounds. It was swathed in cotton and surrounded by hot water bottles. In lieu of an incubator it was placed in a wool bag containing hot water bottles, it was fed by dropper on mother's milk. The child thrived and grew and to-day is one of the prettiest babies in the State, at four months weighing eight and one half pounds.

Dr. T. B. Greenly of Meadow Lawn, read a paper upon

RESUSCITATION OF STILLBORN INFANTS.

In the practice of fifty years only three or four cases of still birth could be recalled, save those which had to be eviscerated. Cold water thrown on face of asphyxiated infant, placing in water, temperature of 115 to 120 degrees, and artificial respiration. Considerable time may be spent in latter. Marshall Hall's and Sylvester's methods recommended, retraction of tongue, wiping out mucus in mouth. Schultz's swinging method frequently successful.

Dr. J. A. Larrabee, Louisville—The remarkable tenacity of infants to life must be noticed at a time when resuscitation must be done. The best method is that of Credé. Marshall Hall's method is rarely properly applied, the artificial respiration being too often made.

Dr. J. G. Carpenter, Stanford—A method used which is of service is to take hold of tongue with forceps. Invert patient on head and employ artificial respiration.

Dr. Jno. G. Cecil of Louisville—The case presented by Dr. Dixon is one of extreme interest, it was surrounded with the gravest complications and it should go down on the annals of obstetrics as simply wonderful. The subject of incubators is certainly interesting and this treatment has been much neglected. There are several reasons why children do not breathe promptly, it is frequently because they strangulate from mucus in the mouth. All artificial respiration may fail if this is not removed. It can be removed by a catheter introduced into naso-pharynx and larynx and drawn out by mouth. A child delivered by forceps after long labor suffers from a congestive asphyxia and if the cord is cut and allowed to bleed the blood pressure is relieved.

Dr. R. B. Gilbert of Louisville, in closing the discussion said that a tobacco smoker or user may kill child by blowing nicotin in air passages of child when insufflation is practiced. Dr. Dixon's case is remarkable.

Afternoon Session.

The following papers were read by title: "Eye Strain," by Dr. P. Richard Taylor of Louisville, and "Punctured Wounds of the Eye," by Dr. A. G. Blincoe of Bardstown. Dr. J. G. Carpenter of Stanford, read a paper upon "Appendicitis with Purulent Peritonitis."

Dr. R. D. Pratt of Shelbyville, read a paper entitled

A STUDY IN APPENDICITIS.

He reported fifteen cases, twelve of which recovered without operation, three died, one without operation, two after. Only four cases were in females, age from eleven to sixty years. Recurrence occurred in four cases. All cases are not believed to be surgical. They may be so considered in larger cities, but not so in small towns or country. No one should go into cavity without special training. Surgical cases represented as those in which, 1. There is rapid destruction of appendix and quickly developing septic or purulent peritonitis. 2. Moderately severe onset in which the symptoms do not yield in few hours to treatment or gradually getting worse indicating peritonitis or sepsis. 3. Cases with initial symptoms which rapidly disappear, there persists a condition simulating a pyemia or septicemia. 4. In the recurrent cases where attacks are getting more and more frequent. Saline treatment should always be used, never opium. But abscess may be ruptured by increased peristalsis.

Dr. F. N. Baughman of Flat Lick—Nearly all surgeons tell too much about how to do the operation and leave too much for granted as to the after-treatment. Aristol is an excellent remedy to use to prevent re-adhesions when put over inflammatory surfaces. As to drainage, aseptic gauze is the best we have. To prevent hernia the Halsted woven wire suture should be considered.

Dr. A. M. Cartledge of Louisville—Appendicitis is evolved by series of lesions. Is a case well when abscess ruptures in intestine? They subsequently have trouble due to the appendix abscess filling up, giving a train of symptoms generally thought to be recurrent appendicitis.

Dr. H. H. Grant of Louisville—Too little is thought of appendicitis: in all cases of this trouble it is a foreign body inflammatory, suppurative and gangrenous. It is removed safely and easily if under favorable conditions and if instituted

early little harm can come, but it is generally fatal if there is neglect to do so.

DR. ARCH. DIXON of Henderson believes that appendicitis is an acute septic, infectious disease from the start. It is the duty of the physician as soon as diagnosis is made to call surgeon and do the operation. It is a surprise to see Dr. Hunter McGuire say that it is best to wait and see what the patient will do. Operate as soon as the diagnosis is made.

DR. J. G. CARPENTER of Stanford—Pus in the abdomen demands prompt surgery. Patients however do recover without operation. Conservative surgery is what is needed, not meddlesome surgery. No reason why the general surgeon should not operate. The drainage tube and gauze are both good as drainage.

DR. R. D. PRATT of Shelbyville stated that few general practitioners are capable of doing an abdominal operation; these should be relegated to the specialist. All cases of appendicitis are not surgical; of the twelve cases, twelve recovered with medicinal treatment, one case following rupture of abscess in intestine, and in three years had no recurring attack. Opium should never be given unless absolutely necessary.

A paper was read by DR. AUGUST SCHACHNER of Louisville, on "Transfusion, Infusion and Autofusion."

DR. J. C. CARRICK of Lexington, contributed a paper upon

GONORRHEA IN THE FEMALE AND ITS TREATMENT.

The discovery of the gonococus has been a great help in study of this disease. Gonorrhea in female has a tendency to pass through rapidly acute stage into the chronic. These patients are generally sterile, they have great discomfort and pain and health is impaired. There is an exudative inflammation of the submucous connective tissue; blood vessels undergo abnormal enlargement. In treatment disinfect urethra, peri-urethral glands, Bartholin glands, vagina and uterus, with rigid antisepsis.

DR. C. B. SCHOOLFIELD of Dayton read a paper on

CHOLELITHIASIS.

The predisposing causes are invalidism child-bearing and abdominal tumors. They are formed in gall bladder and hepatic duct, principal composition is cholesterin and epithelium from mucous membrane and occasionally bilirubin. They may number one or a thousand. First intimation of gallstones is usually biliary colic, lancinating tearing pain located over right hypochondriac and epigastric region. Gastric symptoms usually most prominent, pain greatest when food passing from stomach into duodenum. Jaundice occurs in only about 50 per cent. of cases. Movable kidney difficult to differentiate. Kidney movable, pain follows ureter. Medical treatment give remedies which increase rapidity or flow of bile; course of treatment at Mineral Springs recommended. Surgical treatment, when demonstrated beyond a doubt: the case is not medical but becomes surgical at once. Before obstruction of ducts cholecystotomy is one of the easiest operations, and one of the most successful. If obstruction occurs it is difficult and dangerous. Preparation of patient same as recommended in other abdominal operations.

DR. A. M. CARTLEDGE of Louisville—In fifteen cases operated upon, jaundice was a symptom in only two. One was pronounced, obstruction being in common duct, and was the only death in the series. It is a most common affection, and is confounded with dyspepsia. In operating a misplaced kidney may be gone down upon, and it has been found that the symptom usually described, of tumor moving with the diaphragm is not a good one, and not a diagnostic symptom. Exploratory operation is the step to take to clear up the diagnosis. The operation promises to be the most successful of all abdominal operations.

DR. W. C. DUGAN of Louisville—Jaundice rarely found, and when found can invariably tell patient that it is not in the cystic duct but in the hepatic or common duct. Removal from the cystic duct is easy, from the common duct very difficult. Local tenderness and muscular rigidity are important symptoms. The incision when operating must be made through the median line or the muscle. The greatest danger lies in the irrigation, this being either done too soon or allowed to flow too fast as to tear the anchoring loose. The water should flow out as fast as it flows in.

DR. C. B. SCHOOLFIELD in closing stated that the dyspeptic symptoms are the most prominent ones: the pain comes on some time after the ingestion of the food when it is passing from the stomach into the duodenum. Jaundice is seen but in a few cases.

DR. L. S. MCMURTRY of Louisville presented a paper upon "Modern Gastrostomy for Stricture of the Esophagus, with Report of Case." This paper will appear in the JOURNAL.

DR. J. A. STUK of Lexington, presented a paper on

DISEASE OF THE ACCESSORY NASAL CAVITIES.

Far more frequent than formerly thought, many old catarrhal patients continued to suffer long after removal of all visible obstructive and diseased tissue in nasal and pharyngeo-nasal cavities: 1. Acute suppurative sinusitis with complete occlusion of normal outlet. 2. Chronic suppurative sinusitis with moderately obstructive openings. 3. Myxomatous or polypoid degeneration.

Transillumination with electric light is aid to diagnosis: it is not certain but enough to justify exploratory incision, with small burr attached to dental engine, small sharp currette or cutting forceps. Lamp is six-candle power. Frontal sinuses illuminated by using small one candle power lamp, over which is drawn a piece of rubber tubing, allowed to project about one-third of an inch beyond lamp. This free end is placed under the orbital plate of frontal bone near the inner canthus, the eye being kept closed. Several interesting and illustrative cases were reported.

DR. DUDLEY S. REYNOLDS of Louisville long since abandoned opening the antrum through the canine fossa; the teeth press up, carry the bone with them and as far forward as the canine fossa; the antrum is narrow and the cavity sets down below the line of the insertion. Best to open below this line through the second molar, using incision through soft parts and the bone, drill the opening large enough to permit good drainage and injection of disinfection fluid, peroxid of hydrogen and bichlorid of mercury; the latter, 1 grain to 1 ounce of water.

DR. T. C. EVANS of Louisville—Little was said about the fact that the greatest number of acute cases get well, if uncomplicated with polyps in nose or carious teeth, without operation or washing out through the maxillary sinus. The second molar tooth is best place for drainage, turning over to dentist to do operation and inserting gold tube.

TREATMENT OF TRACHOMA AND ITS COMPLICATIONS.

Subject of a paper by DR. T. C. EVANS of Louisville—Consideration limited to treatment of trachoma proper, embracing the medical and surgical treatment of essential lesion of disease, the true granulation or "sago," of complications embracing various forms of ulcerative keratitis, photophobia, pannus and eczema of lids; those sequelæ embracing opacities, staphyloma of cornea, xerosis and cicatrices of conjunctiva, deformities of tarsus, ptosis, trichiasis and distichiasis of lids. Medical treatment consists in local application of escharotics, stimulants, astringents and antiseptics. Most common are sulphate of copper, bichlorid of mercury, ammonia, muriate, yellow oxid of mercury, tannin and boric acid. Bluestone oldest remedy. Thoroughness and duration of application important. Wash of boric acid in addition to copper. Time necessary to obtain cure is longer than usually supposed. Of surgical methods in use two may be mentioned: Excision of cul-de-sac and operation by expression or squeezing. In the latter operation the doctor should wear eye-glasses to protect his own eyes. The after-treatment should consist of ice cloths and proper antiseptic precautions for forty-eight hours; routine escharotic being resumed later. The ideal treatment is the combination of the medicinal and surgical, and the patient should be impressed with the fact that the operation will not be the end of his trouble. At best it is a dangerous disease and the treatment will be tedious.

DR. G. G. THORNTON of Gravel Switch followed with a paper on

THE SCIENTIFIC AND COMMON-SENSE TREATMENT OF TYPHOID FEVER FROM AN ETIOLOGIC AND PATHOLOGIC STANDPOINT.

If seen early the prognosis in cases that are not complicated from the beginning should be favorable and the mortality should be *nil* if given the proper treatment, medicinal and hygienic. There is not any doubt in anyone's mind as to the germ origin of the disease. The germ may pass in the dry state by inhalation into the fauces, by means of water and milk. The disease is primarily local, and is systemic only after the absorption of the typho-toxin. Its insidiousness is explained by the origin of the toxins. Typho-malarial fever is a misnomer in this section. An early diagnosis is of importance. The first thing after a diagnosis is made or a suspicion of one, we must insist on patient going to bed. Put system in the best possible condition for the battle with disease on one hand, and his powers of resistance on the other; ½ grain of calomel every hour for three doses, then every two hours till good, free evacuation is produced; the diarrhea, if continued, control by opium and bismuth; to relieve the headache and backache, etc., acetanilid and salol. See that patient is kept quiet and free from annoyance by over-anxious friends. If sleep does not come naturally give chloral hydrate or tr. opii deod. By rendering the contents of the bowel aseptic by the use of anti-

septics, we make it unhealthy for any wandering germ to live. Salol, sulpho-carbolate of zinc and acetanilid are the best under the class of antiseptics.

DR. JOHN G. CECIL of Louisville—It is not necessary to enter fully into the discussion of a subject on which we so entirely agree. However, acetanilid for the fever and headaches is not so good as other remedies. The same results can be accomplished without the depressing effect on the heart by the use of water, Brand's method is one of the most effectual methods of treatment and we can control the fever absolutely, or at least as much as we desire. No one claims that water depresses the heart, but this can not be claimed of acetanilid.

DR. J. M. RAY of Louisville presented a paper on

OBSERVATIONS UPON EYE DISEASES AND BLINDNESS IN THE COLORED RACE.

The proneness of the negro race to develop thoracic diseases, tubercular manifestations, the acquired and inherited results of syphilis and their lessened powers of resistance to diseases of colder latitudes is familiar to every physician. The negro of this locality is not the negro of the cotton fields and sugar plantation of the extreme South. A tabulated report of 1,000 cases of eye diseases, exclusive of defects of refraction was presented. There is a great frequency of difference in eye diseases of two races. Of the series 140 cases of lid troubles were found; not a single case of trichiasis or entropion was found. Of phlyctenular variety of conjunctivitis a large percentage occurred in the negro race. One hundred and seven cases of corneal diseases were found. The form most rife is relapsing destructive ulceration characterized by phlyctenular strumosis. In iris diseases there is proneness to gummatous infiltration to accompany the inflammation. Fifty-three cases of crystallin lens disease occurred, twenty-two in negroes. Negro practically exempt from uncomplicated squint, and when present it was secondary.

DR. DUDLEY S. REYNOLDS of Louisville—"Negro" is a very indefinite term; it is not the pure-blooded African who has these diseases, but the mulatto. Trachoma is not a local disease, is not contagious, but the manifestation of miasmatic infection. The mixed-blooded negro furnishes the large proportion of clinical material in our section.

DR. J. N. BAUGHMAN of Flat Lick—The mulatto race in medicine as in surgery has very little resistance. This is a fact demonstrated long ago.

Here followed a memoir prepared by Dr. Lyman Beecher Todd of Lexington on Dr. Orin D. Todd of Eminence, deceased.

EVENING SESSION.

The following popular addresses were made: "Vigorous Childhood Essential to Green Old Age," by Dr. J. A. Larrabee of Louisville. "The X Rays, illustrated by Experiments and Stereopticon Views," by Dr. Samuel E. Woody of Louisville.

THIRD DAY—MORNING SESSION.

DR. C. C. LEWIS of Stamping Ground read a paper on

COMPOUND FRACTURES.

Regardless of inconvenience an anesthetic should be administered. The important question of amputation can not be decided without an anesthetic, except were there is complete destruction. Before days of aseptic surgery efforts at saving limb proved disastrous, but this element is not considered now. The rules of cleanliness should be applied with all possible emergency and there are no other grounds of safety. The plaster dressing offers fewer objections than any other mode of dressing, and is ideal when it can be aseptically treated and hermetically sealed. If of large size the wound is properly prepared by trimming edges, cleansing, etc., and the Bavarian splint presents many advantages. Hemorrhage must first be stopped, bichlorid, soap, water and brush being used unsparingly, preparing the limb as for amputation. Remove dressing in seven or eight days and if drainage tube is used it can be replaced by absorbable bone drain. The elbow joint and maxillary bone, when subject to violence as to cause compound fracture, require the closest attention. In maxillary fractures interdental splints are necessary. Do not investigate without an anesthetic. Give patient every possible benefit of a doubt in the question of amputation. Select aseptic methods of treating the wound; use a dressing which will give the patient the greatest comfort, the plaster dressing.

The Nominating Committee submitted the following report, which was unanimously adopted: President, Dr. R. C. McChord, Lebanon; First Vice-President, Dr. H. C. Lassing, Union: Second Vice-President, Dr. Arch. Dixon, Jr., Henderson; Secretary, Dr. Steele Bailey, Stanford; Treasurer, Dr. J. B. Kinnard, Lancaster; Librarian, Dr. Frank Boyd, Paducah.

Owensboro was selected as the next place of meeting.

A resolution of thanks was extended the railroads, the hotel, the ladies, and Mr. R. W. McElroy for the admirable entertainment and to Dr. J. A. Lewis, the President, and Dr. R. C. McChord, Chairman of the Committee on Arrangements, for their able administrative efforts.

On motion, the vote making disposition of the report of Committee on Codifying the Constitution was reconsidered and all save that part relating to the election of officers was adopted. The latter was made to lie over until the next meeting.

The Nominating Committee submitted a subsequent report nominating the following as a Board of Censors: Drs. B. L. Coleman, Lexington; John G. Cecil, Louisville; T. B. Greenly, Meadow Lawn.

DR. JOHN MASON WILLIAMS of Louisville read a paper on

THE SCOPE OF COLOSTOMY IN CANCER OF THE RECTUM.

The operation should be considered only as an advanced palliative treatment. If seen early cancer of the rectum is subject to removal. The rational treatment of the train of symptoms which follow cancer of the rectum is colostomy. These symptoms which demand relief are hemorrhage and pain. Left inguinal and lumbar methods are the operations done; the former the best, the chief, because it is an easy matter to see every step of the operation and inspect the bowel before incising. The anus is in front and can be attended to easily.

The President appointed the following committees: On Publication, Drs. H. A. Cottell, Louisville; M. F. Coomes, Louisville; Henry E. Tuley, Louisville. On Public Policy Drs. J. B. Marvin, Louisville; David Barrows, Lexington J. N. Baughman, Flat Lick.

The following resolution was introduced by Dr. John G. Cecil and unanimously adopted:

WHEREAS, Many of the important life insurance companies have reduced the medical examination, and

WHEREAS, Doctors have very generally received scant remuneration for this responsible work, which taxes their skill and time, be it

Resolved, By this Society that on behalf of the members of the Kentucky State Medical Society and of the physicians of Kentucky, we protest against this reduction of the ordinary fee for examination of $5 on the part of the insurance companies, and that we request all doctors of this Society engaged in making life insurance examinations to exact a fee of $5 for each examination.

Upon motion and discussion this was finally adopted.

SOCIETY NEWS.

The Central Iowa Medical Association held its twenty-second annual meeting in Boone, June 19. Papers were presented by Drs. Wright, Nostrom, Allen, Ensign and others. The officers elected for the ensuing year are: A. A. Deering, Boone, president; F. E. Whitley, Webster City, vice-president; G. H. Stanges, Boone, secretary and treasurer. Ames was selected as the place for holding the next meeting.

The Delaware District Medical Society, Indiana, which was in session at Dunkirk, June 15, adjourned to meet next year at Anderson. The officers elected were: President, J. B. Garner of Dunkirk: vice-president, B. S. Hunt of Winchester: secretary and treasurer, Fred J. Hodges of Anderson. Professors Senn of Chicago, Parvin of Philadelphia and Klebs of Berlin, delivered addresses.

The Third District Branch of the New York State Medical Association held their twelfth annual meeting in Auburn, June 11. There were about forty in attendance, representing the counties of Broome, Cayuga, Chemung, Chenango, Cortland, Delaware, Madison, Onondaga, Otsego, Schuyler, Seneca, Tompkins and Tioga. The next meeting of the association will be held at Norwich.

West Virginia State Medical Society.—At the annual meeting of this society held at Wheeling, June 10-12, N. D. Baker, M.D, of Martinsburg, Secretary of the State Board of Health, was elected president for the ensuing year. The next annual meeting will be held in Charleston. The next regular meeting of the State Board of Health will be held in Charleston, about

the middle of July, for the examination of candidates for practice of medicine and other business.

The Medical Society of the County of Erie, N. Y., held its semi-annual meeting in Buffalo, June 9. The following papers were presented: "Acute Epiphysitis," Nelson G. Richmond of Fredonia, N. Y.; "Refraction without Mydriatics," R. H. Saterlee: "Early Treatment of Mental Disease," A. W. Hurd, Superintendent Buffalo State Hospital: "Forced Breathing and the Pneumatic Cabinet," J. H. Pryor.

The American Microscopical Society will hold its nineteenth annual meeting in the new Carnegie Library Building, Pittsburg, Pa., Aug. 18, 19, 20 and 21, 1896. A hearty welcome will be extended to all interested in the microscopic sciences. Applications for membership and titles of papers to be read at the meeting should be addressed to A. Clifford Mercer, M.D., president, Syracuse, N. Y., or to Wm. C. Krauss, M.D., secretary, Buffalo, N. Y.

The British Medical Association Congress at Carlisle.—Dr. Henry Barnes of Carlisle has been appointed as acting president on account of the death of the president, the late Sir Russell Reynolds. The arrangements for the Carlisle meeting of the British Medical Association at the end of July are in a forward state and there is every reason to anticipate a successful session. Dr. Barnes is the physician to Cumberland Infirmary, and he has chosen one of his colleagues, Dr. Roderick Maclaren, to deliver the address in surgery. It is understood that Dr. Maclaren will devote one section of his address to some comments upon the new aid to surgery presented in the discovery of the X photographic rays. Of the nine sectional presidencies, four will be filled by local practitioners.

Pacific Coast Association of Insurance Examiners.—The second annual meeting of this association was held in Portland June 9. The president's address was delivered by J. B. Eagleson, M.D., of Seattle, Wash. The following officers were elected for the year, viz.: K. A. J. Mackenzie, M.D., Portland, Ore., president: Drs. W. J. McGuigan, Vancouver, B. C.; Benj. R. Swan, San Francisco, Cal.: C. L. Sweet, Boise, Idaho: J. M. Sligh, Granite, Mont.: W. F. Amos, Portland, Ore.; Samuel C. Baldwin, Salt Lake City: G. S. Armstrong, Olympia, Wash., vice-presidents for their respective States; Henry W. Coe, M.D., Portland, Ore., secretary. The next annual meeting will be held at Spokane in conjunction with the Washington State Medical Society, in May, 1897.

Massachusetts State Medical Society.—The one hundred and fifteenth annual meeting of the Society was held in Boston, June 9 et seq. There was a large attendance of members. The Shattuck lecture was delivered by Dr. W. W. Keen of Philadelphia, on "The Surgery of Typhoid Fever." He gave especial attention to the subject of gangrene. That typhoid fever had important surgical relations was now recognized by the profession. English and American authors had not in the past given the necessary attention to the appearance of gangrene after typhoid. The chief knowledge of it came from French authors and from a few English and American publications. Gangrene was possible in both mild and severe cases, yet it was happily of rare occurrence—at the rate of four cases annually for the past fifty years. Officers were elected for the ensuing year: President, H. P. Walcott of Cambridge; vice-president, A. Wood of Worcester; treasurer, C. M. Buckingham of Boston; secretary, F. W. Goss of Roxbury; recording secretary, C. W. Swan: librarian, Edward H. Brigham; orator, Z. B. Adams of South Framingham.

Oregon State Medical Society.—The 23d annual meeting of this Society was held at Portland, June 9 and 10. The following papers were read and ably discussed, viz.: Address of Welcome, by A. C. Smith, Portland; "The Family Sponge and How to Clean It," by O. H. Beckman; "Some of the Phases of Criminal Abortion," by Richmond Kelly; "Varicocele," by M. Fried; "Slight Ailments," by J. A. Geisendorfer; "Cases of Appendicitis," by A. C. Panton; "The Roentgen Rays and their Application in Medicine and Surgery, with a Demonstration," by J. C. Perry, U. S. M.-H. S.; "Mechanism of the Knee Joint," by R. Nunn; "Surgery of the Gall Bladder," by K. A. J. Mackenzie; "Double Castration for Hypertrophy of the Prostate," by David H. Rand; "Inflammation of the Iris and the Ciliary Body," by W. L. Wood; "Treatment of Septicemia, with Report of Cases," by C. J. Smith; "Infantile Mortality due to Impure Milk," by Otto S. Biswanger; "Suppurative Osteo-myelitis," by F. Cauthorn. The president's annual address was delivered by O. D. Doane.

BOOK NOTICES.

A Manual of Physiology with Exercises. By G. N. STEWART, M.A., D. Sc., M.D., Edin., D. P.H. Camb.. of Downing College, Cambridge; Professor of Physiology in the Western Reserve University, Cleveland, etc., etc., with numerous illustrations including five colored plates. London: Bailliere, Tindall and Cox, 1895. 8vo, pp. 796.

In the gradual change now going on in medical education in this country, this physiology is especially welcome. It is a carefully prepared series of exercises illustrating the more important problems of physiology with special reference to their bearings upon the future study of clinical medicine and diagnosis. The book shows how it was prepared and gives one to understand at once that no great effort has been made to follow the customs or prejudices of American medical teaching. Its only concession in this direction seems to be the order of the material of each chapter. The descriptive portion comes first and somewhat resembles an old text book, then follow directions for laboratory exercises. The true pedagogic order would seem to be the laboratory exercises then the descriptive portion. These exercises are practical and every one significant. They have evidently been chosen after experiment with a class of students, in an American medical college. A few of these exercises require apparatus which some colleges could not easily obtain. For the most part the apparatus is simple and could be constructed by the students themselves in an ordinary laboratory workshop. Indeed this preparation of apparatus is very desirable. This book can be recommended to any teacher of physiology as a work likely to give him that necessary guide which will permit a change from the old lecture system to the laboratory method of teaching physiology. The smaller medical schools have a decided ally in this book in their effort to rival the larger metropolitan schools in instituting better and more effective methods of teaching.

Transactions of the Royal Academy of Medicine in Ireland, Vol. XIII, 1894 and 1895, 464 pages. Edited by WILLIAM THOMSON, M.A., F.R.C.S., General Secretary, Surgeon to the General Hospital, Dublin, Ireland. Printed by Fannin & Co., Limited, Grafton Street, Dublin. The contents includes lists of officers and members, etc.

The sections of medicine, surgery, etc., contains forty-nine papers. H. C. Tweedy, M.D., F.R.C.P., reported a case of argyria on account of its comparative rarity, the prolonged use of nitrate of silver in locomotor ataxy having declined. The patient first came under his observation in 1871, suffering with well marked ataxic symptoms. He was ordered $\frac{1}{3}$ grain nitrate of silver three times daily. This treatment was continued at intervals till 1876. In 1882 he again appeared at Steevens Hospital, when the change in his complexion to a dull slaty blue was noticed for the first time. The ataxic symptoms had, however, disappeared.

Injuries of the Thumb, by Edward H. Bennett, M.D., F.R.C.S. He described the various dislocations of metacarpo-phalangeal joint and submitted an example of complete dislocation inward of the phalanx which he believed to be the only case yet observed.

Arthur Benson, M. A. University Dublin, F.R.C.S., submitted report of cases of acromegaly with ocular complications. The papers are carefully prepared and of general interest.

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All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 61 Market Street (Occidental Buildings), Chicago.

Original communications are only received with the understanding that they are exclusively contributed to this JOURNAL.

INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, JUNE 27, 1896.

CLOSE OF VOLUME TWENTY-SIX.

With this issue we close twenty-six volumes of the JOURNAL OF THE ASSOCIATION—covering a period of twelve years of American medical literature—and comparing the volume just closed with its predecessors, we can freely say that the improvement has been steady from its commencement. Indeed, the growth of the JOURNAL in the last year has been phenomenal; the current volume contains about three hundred pages of reading matter more than any of its contemporaries, and double the number of pages of reading matter found in some of the weekly journals. That the ASSOCIATION can maintain a first-class medical weekly is therefore self-evident, and its wonderful growth in the last year must be taken as simply a prelude to the development that is to come in the near future. Its broad pages teem with brilliant suggestions not only from the members of the ASSOCIATION, but from the keenest observers throughout the medical world.

The next volume will begin with an enlarged JOURNAL—eight pages of reading matter each week will be added—and without boasting of future performances, we can only promise that the material in the enlarged issue will be equal, if not superior, to that published during the last three years.

We have one satisfaction in this work, and that is the sincere sympathy, kindly forbearance and the hearty encouragement the present editorial management has received from the ASSOCIATION itself, and it is certainly true to-day, as never before in the history of the ASSOCIATION, that the ASSOCIATION is alive to the necessity for enlarging and extending the power and usefulness of the organization, and the considerable increase in members that has taken place in the last year should serve as an incentive to renewed exertions and harder work on the part of each and every member of the ASSOCIATION. There is no reason why the AMERICAN MEDICAL ASSOCIATION should not have fifty thousand members. There is no reason why the power and influence of the ASSOCIATION should not be felt in all matters of National legislation, even more in the future than in the past, and we should strive by all legitimate means to enroll every worthy member of the profession under the banner of the great National organization. Let us all work to that end.

Let us have a Department of Public Health.

AN EXPLANATION IS IN ORDER.

At the recent sparsely attended National Conference of State Boards of Health, held in Chicago June 10–12 inst., one of the topics for discussion was the necessity for a "National Department of Public Health," the topic being proposed by the State Board of Health of Alabama and the discussion, according to the program, was to have been opened by DR. J. N. MCCORMACK of the Kentucky State Board of Health. In DR. MCCORMACK'S absence the discussion was opened by DR. JEROME COCHRAN of Alabama, who spoke at considerable length in advocacy, not of a National Department, nor even of an independent Bureau of Public Health, but of a sub-bureau of the Marine-Hospital Bureau, with its chief officer to be appointed by the Supervising Surgeon General of the Marine-Hospital Service.

Naturally there was considerable surprise among such of the delegates as had given the subject thoughtful consideration and DR. HENRY B. BAKER of Michigan rose to reply with the intent to bring the discussion back to the topic proposed, to-wit, the desirability of a National Department of Public Health. So much time, however, had already been consumed in setting forth the claims of the proposed sub-bureau that DR. BAKER was requested to be very brief and, as a matter of fact, no discussion in opposition was permitted. DR. COCHRAN, being again awarded the floor, asked that each State Board of Health appoint a committee to act with himself as Chairman of the whole, to labor for the creation of this sub-bureau. On a motion to adopt the recommendation of DR. COCHRAN, DR. BAKER moved as a substitute that the Conference appoint a special committee to co-operate with the committee of the AMERICAN MEDICAL ASSOCIATION and with the similar committee of the American Public Health Association. This substitute was rejected by a vote of 8 to 5 and DR. COCHRAN'S plan was then adopted—presumably by the same vote,

that is, eight delegates out of a total of some forty-odd who should have been present.

DR. BAKER and the other four delegates who voted with him were careful to state that they had no desire to oppose any movement that promised advancement in public health administration by the National Government and that there was no objection, *per se*, to the elevation of the Marine-Hospital Bureau to the dignity of a Department of Public Health; but they condemned the proposition to place the public health affairs of a continent in charge of a *sub*-bureau or division as belittling the whole movement.

The JOURNAL trusts that it has been misinformed as to the facts and that a mere majority of this baker's dozen of delegates has not assumed to commit the health boards of forty-five States and the Canadian provinces to this retrograde action. A telegram to the Secretary of the Conference requesting a copy of the proceedings elicits the fact that he is on a vacation. We forbear further comment until after a perusal of DR. COCHRAN'S argument.

Let us have a Department of Public Health.

THE BACTERIOLOGIC AND CHEMIC TESTS OF DRINKING WATER.

It is probably correct to assume that at the present time there is a strong tendency amongst physicians to overestimate the importance of bacteriologic diagnosis as compared with that by other long-used methods, and this tendency finds expression not only in common practice, but is encouraged to some extent by the writings of high authorities. The term "overestimate" is here used advisedly because, with all its value, the discovery of actual germs is not everything in itself and is, moreover, often difficult or impracticable while other methods are available.

Within the past few months or a year, there have been several papers and memoirs published that have a bearing on this question. An English authority, PROFESSOR HANKIN, sent out a pamphlet the object of which was largely to magnify the importance of the bacteriologic over the chemic tests in the examination of drinking water, and on the other hand, DR. DUPRE in England and MR. W. P. MASON in this country, have in their publications upheld the importance of the chemic analysis. FLUGGE in Germany, and THRESH in England, rightly insist that neither the microbic nor the chemic examination of samples is sufficient without attention to the sources of the supply and all its surroundings. This, however, does not do away with the use of either of the two methods, and in case of suspected sources of drinking water, such as wells or springs, the question still remains: On which shall dependence be placed? Some time since, the London Board of Public Works sent out to several chemists samples of water purposely infected with typhoid germs for analysis, and as in each case the water was reported as pure, this has been used as an argument against the value of chemic examinations. It is possible that a still later examination microscopically might have also failed to detect the introduced germs, for chemically pure water is a poor culture medium, and according to good authorities, bacterial life will not thrive in it. At any rate, the experiment proves nothing without this test and, with it, would still be inconclusive.

The chemic examination of drinking water demonstrates the possibilities of its infection by morbific germs, and therefore, as DR. DUPRE and MR. MASON have shown, enables us to anticipate danger even if it may not be actually present. It is moreover, in its simpler forms, generally practicable and available and, so far as it goes, covers the whole ground, while it is not certain that we have yet discovered all the germs and the methods of their detection in water-borne disease.

Notwithstanding the great advances that have been and are constantly being made in the bacteriologic examination of water, we are not yet prepared to do without the careful chemic analysis in estimating the dangers of its pollution. And, inasmuch as prevention is better than cure, the discovery of the conditions that favor bacterial growth in water is of more importance than waiting till the actual appearance of the germs of disease, in forming a judgment as to its safety.

It must not be understood that the use of bacteriologic tests is here decried. Their value is beyond question, but with our present knowledge and methods they can not entirely supplant, and can indeed often only supplement, the well tried methods of chemic analysis. Each method has its special value, but the chemic test has still in some respects the widest utility. Let us have a Department of Public Health.

ANTITOXIN.

We will next week publish in full the report on antitoxin of the American Pediatric Society, as prepared by a committee and adopted by that body. The subject is full of interest, whether one agrees with the report or not.

Let us have a Department of Public Health.

CORRESPONDENCE.

Did He Sham On The Gallows? A Review of the Windrath Case.

CHICAGO, June 22, 1896.

To the Editor:—Joseph Windrath, a German 29 years of age, married, three children, an expert machinist, was hanged in Chicago June 5th last for the murder of a very popular man, the cashier of the West Chicago Street Ry. Co., when committing a robbery with an accomplice. The sentence set the execution for May 15th, but a reasonable doubt of his sanity being established since the date of sentence a respite was granted for a trial on that score, as the law of Illinois does not

permit the execution of a lunatic. The State charged that he was shamming insanity and presented six medical witnesses, viz: Drs. N. S. Davis, Sanger Brown, Archibald Church, Walter Kempster, James Lydston and Dr. Fortner who is the jail physician, all of whom testified that he was both sane and shamming. On the other side Drs. Florence Hunt, O. S. Waters and myself testified that he was insane.

I first examined Windrath at the instigation of his attorney on April 30 in a private room in the jail in the presence of a keeper and was introduced to him as Dr. C— sent by his attorney. The examination lasted an hour. He was prompt, pertinent, coherent, distinct, fluent and comparatively composed throughout the interview. He had frequent slight twitchings of the face at different points and a very peculiar facial expression at moments, varying somewhat with the subject of conversation, and evidently an involuntary product, for although inexpressive of any normal emotion it was too spontaneous to be deliberate. In my questioning I drove him "hard and gentle," and attempted to mislead him by suggestions, but all to no purpose. I discovered no delusion excepting the perpetual motion idea, which he had entertained ever since a school boy and was still working upon. When I asked him why he killed his victim he instantly denied the charge and his eyes flashed a most peculiar and strong glare, by which more than any other one thing I recognized latent insanity—a centric instability—a deep seated neurotic state. His pulse was not normal in tone nor febrile nor inflammatory, and therefore was neurotic. I may state here that I have been fifteen years in general practice and ought to know the pulse. Such a thing as a neurotic pulse was denied by some of the experts for the State. Otherwise, as regards his physical condition and moral disposition, there was nothing worth mentioning. He was freely communicative. A few minutes after this general examination I made a visit to the prisoner's cell, unexpected by him, and asked to see his drawings of his perpetual motion machine. He promptly handed them to me and I found them very artistic drawings of a rather complicated and ingenious mechanism. His entire manner had changed and he took a very lively interest, speaking much more rapidly than before, explaining the modus operandi, minus, of course, initial motion and compensation.

As a result of this first examination I did not make a positive report of insanity, but as having the insane diathesis and being so unstable as to be liable to break down into unquestionable insanity at any time. In reality I believed him insane then.

At my second examination some ten days later I stepped to the side of the door of his cell, unknown to him, and watched him a few moments. He was pacing too and fro, but not noisy, though talking to himself or calling to imaginary objects. When I stepped in front of the cell door and called him by name he seemed for a moment to hesitate about coming to the door, but did so and obeyed my request to extend a hand through the bars that I might feel his pulse. His whole body was in a tremor and clammy. His pulse was 120 and neurotic. His face had a wild, confused stare, and he was partially irrelevant to questions, rambling and incoherent in speech, at times talking to voices or imaginary objects. He was stupid to some questions, but to others pertinent.

My third and last examination was ten days later, lasting only a few moments, the morning before I testified in court. He was in bed, but sat up and replied to questions, in a half stupor but more or less pertinent. On being questioned he said his wife and children had disturbed his sleep and he spoke of one or two other vagaries. His breath was distinctly neurotic, smelling somewhat like urine slightly tinged with feculent matter, and which I have never observed except in intensely neurotic cases. Even in such cases it is not always noticeable. It is most noticeable in cases of acute insanity, especially mania and melancholia. I probably would not have noticed it this time had he not forcibly breathed into my face at my request. At my previous examination I had neglected this observation.

From his wife I learned that dating from about two years after marriage he began to act strangely at times, coming home somewhat intoxicated, she thought, when he would sit moodily for a considerable period and talk to himself and laugh and "work his face." In some of these spells he would be silent, only "working his face" as she called it. I examined Mrs. Windrath very carefully, as I was aware she had strong motive to falsifying. For instance I suggested that "he would sometimes come home insanely quarrelsome" but she promptly denied this, and many other suggestions I made to trap her. He also had hallucinations of hearing, at times, dating back several years, when he would charge his wife with calling to him on the street and other places while she was remote from him. I do not doubt these being facts.

Windrath's rather queer look at best would readily suggest to the ever suspecting police that he was a crook, especially if known to be idle or loafing, and it may be that he has been charged with more than is just. From my inquiries of the police authorities in regard to stories of other crimes I find them without any substantial foundation. Up to the close of the World's Fair, at which he was employed, he had been pretty regularly engaged at his business, but at the close of the Fair he fell into enforced idleness and bad company, soon got into the hands of the police on a charge of robbery, which was not fully sustained; and a month or so later was sent to the County Insane Asylum with acute melancholia. He remained at the Asylum about four and one-half months, where he has a clear record of mania and melancholia with delusions of sin, etc. He was discharged *improved*.

I witnessed his execution, but I can hardly do better than give the description of it by the *Daily News:* "The murderer made no struggle, as had been anticipated. He was led out a few minutes before noon, his arms tightly pinioned to his sides. With rolling eyes and blanched face the man presented a terrible sight, his closely cropped hair adding to his strange appearance. He shouted incessantly as the short preparations were being made, his cries being unintelligible. It sounded like 'han up'l bishua.' Then his voice would deepen and he would mumble on: another change and he would seem to be trying to sing. Even after the white cap had been drawn over his head the cries continued and sounded muffled. Jailer Whitman tightened the noose about the man's neck, and his cries were slightly checked. A second later and he shot to his doom. The general opinion was that the man was hopelessly insane."

The experts for the State substantially said he was shamming because, 1, he presented symptoms of two forms of insanity, viz: melancholia and dementia, which they alleged never coexist: and 2, because his condition and conduct were perfectly natural under the circumstances, which, they said, he fully realized.

As regards the first reason, I will say that it is quite in conflict with my own asylum and private practice observations. Let us hear the recent words of one or two first-class authorities on this point. In the *British Medical Journal* of Sept. 28, 1895, page 760, Dr. Henry Rayner, editor of the *Journal of Mental Science* and lecturer on mental diseases, St. Thomas' Hospital College, London, England, says: "Clinically the pathologic unity of insanity is demonstrated by transitions from mania to melancholia or stupor (dementia), by sudden alternation of these states, by their occasional and *partial coexistence in the same case*, and in many other ways. Pathologically, owing to the recent advances in the histology of the cerebral cortex due to Golgi, Raymon y Cajal, Bevan Lewis, Hodge, Batty, Tuke, Andriezan and others, the close relationship of these conditions has become still more obvious."

In the *Lancet* (Lond.) of Jan. 4, 1896, Sir William Broadbent, Bart., President of the London Neurological Society and physician for the Queen, gives a case of "inability to recall the name of the most familiar objects presented to his sight, while he conversed intelligently, employing a varied and extensive vocabulary, making few mistakes, but occasionally forgetting names of streets, persons and objects." Along the same line Maudsley says: "Persons may be very defective (aberrant) intellectually, but very proper in conduct."

The experts for the State alleged that Windrath pretended to forget some of the most familiar things, but answered promptly about others.

As to the realization of acts and circumstances by the insane, if it is simply a question of knowing one thing from another, it must be admitted that they commonly realize about as much as most people. But if the question is as to the proper relationship of things the answer has to be in relative terms, according to the delusional state.

The experts for the State made their examinations of Windrath when his condition of greatest perturbation had subsided, and thus probably found him in a comparatively rational state. Dr. Florence Hunt, examining him about the same time, found his pulse 60 and so testified. Dr. Fortner, a witness for the State, found his pulse 120 a week or so before, when he was most disturbed. The other witnesses for the State said they found his pulse about normal when they examined him. He had no inflammatory or febrile condition whatever at any time, unless during his spell of greatest cerebral disturbance.

Among the peculiar features of the trial was the testimony of an expert ophthalmologist, which in substance was that blindness would affect the brain so as to stunt the development of the mind and preclude intellectual distinction. Had he never heard of John Metcalf, the distinguished mechanic, blind at 6 years of age; John Stanley, the eminent musician, blind at 2 years of age; the noted Helen Kellar, blind at 18 months; the famous Laura Bridgeman, blind at 2 years of age, and our own Dr. Babcock, blind at 9 years of age? This expert testified that Windrath's eyes were healthy and that the eyes of the insane rarely were so. This is something new, and I was not aware that the health of Windrath's eyes had been in question.

Another expert for the State defined insanity quite briefly but rather comprehensively as "a disease of the brain affecting the mind." Thus a headache is insanity. The same expert stated that Windrath spoke of imagining he heard certain voices, and said that a person with a real hallucination would not say he imagined he heard it, but that he *did* hear it. How is it when the hallucinations are gone and the subject realizes they were only imaginings? Will he still say that he hears them? Windrath did not have hallucinations when this expert examined him.

When Windrath was arrested a police inspector asked him if he was going to play his insanity game this time and told him if he was, to hurry up with it. This inspector informs me that he made him confess that he (Windrath), was no more insane than he (the inspector) was. A very natural, or at least usual, confession for a lunatic.

The State had able counsel, but the counsel on the other side was inexperienced in such cases and did not use any medical adviser. However, the jury held out for eight hours and at one time five favored a verdict of insanity.

It must be quite evident that a pure shammer would go to the gallows evincing either cowardice, bravado or repentance. Windrath, as the *Evening Post* stated, went "raving to the very last."

J. SANDERSON CHRISTISON, M.D.

Origin of Our Code of Medical Ethics.

NEW YORK CITY, June 17, 1896.

To the Editor:—Dr. Robert T. Morris of New York City, a member of the AMERICAN MEDICAL ASSOCIATION tells me that I can get a copy of the ethical code by preferring the request to you. If the JOURNAL can do me this favor I should esteem it a great kindness.

And may I ask the further favor of a reference to some history of origins of the ethical code? The high standard of honor, and disinterested spirit, and devotion to mankind that animates physicians has always excited not only my admiration, but my curiosity as to where it came from. A profession is a means of livelihood, but their principles of honor are constantly in the way of doctors making money. It is as if the profession in early days had been a religious order. Knowing this now to have been the case my wonder was excited as to the history of the ethical code.

Begging pardon for thus trespassing on your time, I beg you to believe me. Respectfully yours,

A. D. SAVAGE, M.D.

ANSWER:

The National Medical Convention, which assembled in New York in May, 1846,

Resolved, That it is expedient that the medical profession in the United States should be governed by the same code of medical ethics, and that a committee of seven be appointed to report a code for that purpose, at a meeting to be held at Philadelphia, on the first Wednesday of May, 1847.

At that meeting (Philadelphia, June, 1847); the committee, appointed under the sixth resolution adopted by the convention which assembled in New York in May last to prepare a code of medical ethics for the government of the medical profession of the United States, respectfully submit the following code:

JOHN BELL,
ISAAC HAYS,
G. EMERSON. } Philadelphia.
W. W. MORRIS, Dover, Del.
T. C. DUNN, Newport, R. I.
A. CLARK, New York.
R. D. ARNOLD, Savannah, Ga.

Philadelphia, June 5, 1847.

Dr. Hays, on presenting the report, stated that justice required some explanatory remarks should accompany it. The members of the convention, he observed, would not fail to recognize in parts of it, expressions with which they were familiar. On examining a great number of codes of ethics adopted by different societies in the United States, it was found they were all based on that by Dr. Percival, and that the phrases of this writer were preserved, to a considerable extent, in all of them. Believing that language that had been so often examined and adopted, must possess the greatest of merits for such a document as the present, clearness and precision, and having no ambition for the honors of authorship, the committee which prepared this code have followed a similar course, and have carefully preserved the words of Percival wherever they convey the precepts it is wished to inculcate. A few of the sections are in the words of the late Dr. Rush, and one or two sentences are from other writers. But in all cases wherever it was thought that the language could be made more explicit by changing a word, or even a part of a sentence, this has been unhesitatingly done: and thus there are but few sections which have not undergone some modification: while, for the language of many, and for the arrangement of the whole the committee must be held exclusively responsible.

On motion of Dr. L. P. Bush, of Delaware, the whole of the report, including Dr. Bell's introduction, was adopted.

Scrumpox.—The *North American Practitioner* has the following definition that will not be found in the dictionaries: "Scrumpox" is the English school boy's name for the severe form of impetigo occurring among the forwards of Rugby football teams. The "scrum," or "scrimmage," with its close commingling of heads, arms and legs in indiscriminate confusion, undoubtedly offers ideally favorable conditions for the communication of this disease, which is usually confined to the head and face, and often results in severe suppurative dermatitis, with glandular enlargement.

PUBLIC HEALTH.

Tuberculosis in Germany.—The Imperial Health Officer at Berlin is reported as stating that he has found evidence of tuberculosis in the body of every third person between the ages of 15 and 60 years examined by him.

Dangerous Spread of Cholera in Egypt.—Since the appearance of cholera at Damietta last October it has gradually been spreading, until now there are several localities where it is prevalent, and a panic exists at Alexandria and Cairo to such an extent that people are leaving in large numbers, even those in responsible positions. Eight of the twelve members of the Municipal Council have already fled from Alexandria. The *Semaine Médicale* of June 6 considers this flight of the residents of Egypt a serious menace for Europe, and urges the necessity of immediate quarantine measures. The gravity of the situation is shown by the fact that the authorities of Alexandria have at last commenced, since May 21, to add to their sanitary bulletins the statement that "Cholera exists in Egypt."

The Imperial Health Office of Germany.—According to the *Medical Press and Circular* considerable change in the personnel of the Institute have recently been effected. It is now just twenty years since the Institute was opened with two members—one for the medical and one for the veterinary department. Since then the number of members has steadily increased. There are now eight ordinary members, beside a number of associates. Another member is provided for, however, in next year's estimates, as the present staff is quite inadequate for the work demanded. The new member will undertake the department of public health, so far as it relates to injurious callings and adulteration of food stuffs prejudicial to health. He will also take in hand the testing of drugs in the interests of the new pharmacopeia. Dr. Josefo Brandl, Privat Docent in Munich, has been called to the new post and nominated an Imperial Regierungsrath. Dr. Brandl qualified in 1890, has studied chemistry, was several years assistant to Professor Tappeiner at the Pharmacological Institute, Munich, and is author of several contributions in his department of science.

Fixing Population by Resolution.—After figuring its death rate for some eighteen months on a basis of 1,600,000 Chicago has resolved, through its city council, to cut down the rate by adding 150,000 to its population. The following is the text of a preamble and resolution to that effect adopted by that body at its meeting on the 22d inst.:

WHEREAS, A recent enumeration by the United States postal authorities shows that there are 202,511 habitations in the city of Chicago, exclusive of stores, office buildings, factories and other places not used for dwelling purposes; and

WHEREAS, The United States census authorities in 1890 found the average number of persons in each such habitation was 8.6; and

WHEREAS, It is desirable for certain municipal purposes that the population of the city be fixed and declared; therefore, it is hereby

Resolved, That the minimum population of the city of Chicago for the current fiscal year 1896 be held to be that determined by the above factors—that is to say, in round numbers, 1,750,000.

Probably this is as good a way as any to guess at what should be a matter of exact determination by a careful enumeration; but our whole system of census-taking, from the national inventory down to the census taken by the police force, is exasperatingly defective. No vital statistics based on such figures can possess any value or command any credence. Chicago, for example, on this officially resolved figure of population, will have a death rate of about 13.5 per thousand for the current year. The only thing which is absolutely certain concerning the city's mortality is that there have been a few less deaths so far this year than there were during the corresponding period of last year. Between January and May, inclusive, in 1895 there were 10,436 deaths: this year there were 9,879 deaths. As deaths are reported with substantial accuracy, these figures may be accepted, but whether the deficit of 557 deaths this year is due to a loss of population or to more favorable seasonal conditions, is purely conjectural.

It is regrettable that our large cities do not adopt some such system of census taking as obtains in the large cities of Europe. Until this is done, our figures of population and death rates based thereon will continue to be looked at askance.

Epidemic of Smallpox in the Island of Guernsey in 1895.—In the *British Medical Journal* for May 2 Dr. Ernest L. Robinson of St. Peter Port treats of a variolous epidemic in that island, in 1894 to 1895. His testimony of the efficiency of vaccination is in a line with all other properly reported results where the health officers act promptly and energetically. He well says that to the great energy of the authorities in pushing vaccination is due the fact that the disease was stamped out in sixty days. It further appears from his report that not a single properly and timely revaccination was followed by the taking of the disease. And yet there are those among his and our fellow-citizens who ask us to throw away this grand prophylactic measure. He further says:

"Guernsey has been peculiarly free from smallpox for some time, there not having been an epidemic of this disease for about seventeen years. The epidemic began early in December, 1894, and the last case notified to the authorities appeared on Feb. 17, 1895. The disease was evidently imported from St. Malo, where a severe epidemic was raging at the time, by French people, as the first cases in the island were found among some women of that nationality, living in a low quarter of St. Peter Port. Before the disease had existed more than a few days, an ordinance was framed and published whereby compulsory vaccination was ordered and enforced in all parts of the island, the consequence being that by the middle of January, 1895, nearly half the population had been vaccinated or revaccinated. To the great energy of the authorities in enforcing these measures, with scarcely a delay of one day, is to be attributed the fact that the disease was eradicated in about two months from its first appearance, and that only forty-one persons out of a dense population of considerably over 35,000 were attacked. There were altogether forty-one cases; two of these were attended by a medical man who died shortly afterward, so that all that I can say about them is that they were both mild, and that both recovered. Of the remaining thirty-nine I have collected the following facts: Four deaths occurred; three of these victims were unvaccinated and the fourth (a prostitute worn out by various excesses) was only vaccinated some three days before the initial fever. Of the whole thirty-nine cases, twenty-four were unvaccinated (these latter including seven who were vaccinated during the period of incubation of the fever), and fifteen were vaccinated. I may add here that of the seven cases vaccinated during the period of incubation one died, as before mentioned, and the remaining six suffered mild attacks (discrete) only, showing that vaccination, even when performed so late in the day, is still very efficacious.

"There were seventeen cases of confluent smallpox, fifteen of these being unvaccinated, and two vaccinated, whose ages were respectively 34 and 15; the last had not even a trace of his old marks.

"There were twenty-two cases of discrete smallpox (all returned as mild cases), of which thirteen had been vaccinated in infancy. Of the remaining nine six had been vaccinated during the period of incubation of the fever, leaving only three absolutely unvaccinated.

"There was not a single case of a revaccinated person catching the disease with the exception of one person, who was revaccinated during the period of incubation.

"The ages of the thirteen mild cases among the vaccinated patients were 30, 24, 19, 35, 31, 4 (only two marks), 35, 30, 22, 18, 26, 13 (only two marks), 16. Thus only one of these was under 10 years of age, namely, a child of 4, with only two very indistinct marks."

Health Reports.—The following health reports have been received in the office of the Supervising Surgeon-General Marine-Hospital Service:

SMALLPOX—UNITED STATES.

Louisiana: New Orleans, May 1 to 31, 25 deaths; June 6 to 13, 5 cases, 2 deaths; Shreveport, June 6 to 13, 6 cases.

SMALLPOX—FOREIGN.

Dublin, Ireland, May 31 to June 6, 1 case.
Bologna, Italy, May 31 to June 6, 1 case.
Bombay, India, May 12 to 19, 25 deaths.
Calcutta, India, May 2 to 9, 3 deaths
Cardiff, Wales, May 31 to June 6, 1 case.
Corunna, Spain, May 16 to June 6, 5 deaths.
Genoa, Italy, May 31 to June 6, 2 cases, 1 death.
Gibraltar, May 24 to 31, 1 case.
Licata, Italy, May 23 to 30, 3 deaths.
Madrid, Spain, May 24 to June 2, 15 deaths.
Montevideo, Uruguay, May 9 to 16, 3 cases.
Moscow, Russia, May 9 to 23, 4 cases, 1 death.
Naples, Italy, May 31 to June 6, 5 cases, 3 deaths.
Osaka and Hiogo, May 2 to 24, 55 cases, 21 deaths.
Palermo, Italy, May 23 to 30, 2 cases.
Prague, Bohemia, May 23 to 30, 2 cases.
St. Petersburg, Russia, May 23 to 30, 34 cases, 3 deaths.
Southampton, England, May 30 to June 6, 1 case.
Tuxpan, Mexico, May 23 to 30, 4 deaths.
Warsaw, Russia, May 9 to 30, 4 deaths.
Yokohama, Japan, May 8 to 15, 1 case.

CHOLERA.

Alexandria, Egypt, May 7 to 13, 125 deaths.
Bombay, India, May 12 to 19, 16 deaths.
Cairo, Egypt, May 7 to 13, 5 deaths.
Calcutta, India, May 2 to 9, 177 deaths.

YELLOW FEVER.

Lagua la Grande, May 31 to June 6, 17 cases, 3 deaths.
Havana, June 4 to 11, 17 cases, 9 deaths.

NECROLOGY.

J. F. POTTS, M.D., of consumption, at Detroit, Mich., June 8, aged 59 years. He was a student at Illinois College, Jacksonville, graduated from Union College, Schenectady, N. Y., then entered Jefferson Medical College Philadelphia, graduating there also. He served during the civil war in the Seventh Rhode Island cavalry.

CHARLES M. NES, M.D., at York, Pa., June 12, aged 69 years. Dr. Nes was one of the three commissioners appointed by General Grant to represent the State of Pennsylvania at the Vienna Exposition in 1873. He was the inventor of the Nes Silicon method of converting iron ore into steel, the discovery of which he made by noticing the peculiar action of electricity upon iron. On a visit to a patient who had been struck by lightning he noticed that the barrel of an old army musket which stood in a corner of the room and had felt the effects of the bolt, had been converted into a particularly high quality of steel. Acting upon the suggestion, he experimented with magnetic ore until the results obtained justified him in obtaining letters patent in the United States, Great Britain, France and Belgium.

EDWIN D. RAMSDELL, M.D. (Medical Department of the University of the City of New York, 1855), of pneumonia, at New York city, June 12, aged 66 years. He was a member of the Medical Society of the City and County of New York, which membership he held for twenty-five years. Until recently he was a member of the Academy of Medicine.

JOHN L. ROBINSON, M.D. (Harvard University Medical School, Boston, Mass., 1859), at Manchester, N. H., June 13, aged 61 years. He served during the war as a surgeon of the Eighth Massachusetts Volunteers, was a member of the Massachusetts and New Hampshire Medical Societies and one of the vice-presidents of Harvard Medical School Alumni Association.

MICHAEL H. MCGOVERN, M.D. (College of Physicians and Surgeons, Baltimore, Md., 1884), of apoplexy, at Pen Yan, N. Y., June 10, aged 38 years. Emer C. Hoover, M.D. (Medical College of Ohio, Cincinnati, 1878), of apoplexy, at Dayton, Ohio, June 13.——H. H. Ferguson, M.D. (University of Louisville Medical Department, 1867), at Jeffersonville, Ind., June 15, aged 51 years.——Egbert B. Henion, M.D. (College of Physicians and Surgeons, Baltimore, Md., 1882), at Sweden, N. Y., June 11.——A. T. Clason, M.D. (University Medical College, New York, 1886), at Danbury, Conn., June 16, aged 56 years.——Horace Hoyt, M.D. (University of Buffalo Medical Department, Buffalo, N. Y., 1848), at East Aurora, N. Y., June 17, aged 73 years.

MISCELLANY.

New York Polyclinic Medical School and Hospital.—Dr. W. W. Van Valzah has been elected Professor, and Dr. J. Douglas Nisbet, Adjunct-professor in the Department of General Medicine at the New York Polyclinic Medical School and Hospital. Their lectures will be devoted to "Diseases of the Blood and Digestive Organs."

Fraudulent "American" Potted Meats made in Europe.—According to the *Progrès Médical* of May 2, there are at Rotterdam and Antwerp large and important factories which import worn out omnibus horses from London, and make them up into excellent potted meats, labeled as if they came from America and widely sold all over Europe. They dispose of 26,000 horses a year.

Acromegalia and Gigantism.—Brissaud considers these the same disease, the difference between them being merely a question of age. If it commences before the bones have attained their growth, they lengthen and produce the malformations known as gigantism, while they grow "cubically" in an adult, when it is called acromegalia—*Gazette Médicale de Paris*, May 16.

Decision that Venereal Disease is Sufficient Cause for Divorce.—The *Semaine Méd.* states that the Paris Court of Appeals recently decided that the fact of marrying before being cured of a venereal disease, and knowingly communicating it to the other party in the marriage, is sufficient cause alone to allow a divorce.

Yale Annual Address in Medicine.—The annual address in medicine of the Medical Department of Yale University was delivered by Ex-Col. Geo. E. Waring, Jr., June 23. In the evening a card reception to Col. Waring was given at the house of Prof. Charles A. Lindsley by the Medical Faculty of the University.

Anti-Streptococcus in Operating on a Diabetic Patient.—Boucheron recently removed a cataract from a patient, 70 years old, in an advanced stage of diabetes, complicated by the streptococcus affection, lymphangitis of the foot and limb. The operation was successful, the wound healing by first intention. He ascribes his success to the fact that he administered 20 grams of Marmorek's serum, which attenuated the streptococci, before he began operations.—*Gazette Médicale de Paris*, May 16.

Cerebral Hemorrhage in Whooping Cough.—A case is described in the *Deutsch. Med. Woch.* for April 23, in which the symptoms of cerebral hemorrhage, convulsions, hemiplegia, word-blindness, stupor, etc., suddenly appeared in the course of an attack of whooping cough. They gradually passed away after six days, until none were left by the end of three weeks. The writer adds that this is the eighth case on record of this complication, and in this case the patient, a lad of 8 years, had been instructed by his father to hold his hand over his mouth and nose to suppress the paroxysms, which may possibly have been the cause of the rupture of the blood vessel in the brain.

Five Months Fetus Developed in the Abdomen of a Young Man.—A strange case was reported at the meeting of the Académie de Médecine, May 5. A young man was operated upon for what was supposed to be a large abdominal tumor. It proved however to be a dermoid cyst, containing a female fetus as large as is usual at five months. The ovum in the cyst had probably lain latent until puperty or some traumatism had started it to grow. The young man did not long survive the operation, and died ignorant of the existence of a little sister in his supposed tumor. The *Jour. de Méd. de Paris*, for May 31, contains more details than are given in the *Bulletin* of the Académie.

Second Pan-American Medical Congress.—Dr. H. L. E. Johnson, Chairman of the Transportation Committee of the first Pan-American Medical Congress is arranging with the Passenger

Association for reduction in transportation for those who will attend the second Pan-American Medical Congress to be held in Mexico City in November next. The fare will in all probability be one and one-third rate on the certificate plan, but he hopes to secure a one fare rate for the round trip. An estimate will also be submitted for a special train, via Boston, New York, Philadelphia, Baltimore, Washington, Cincinnati, St. Louis, Laredo or Eagle Pass, to the City of Mexico and return. A full report will appear in the JOURNAL at an early date.

The Koch Institute of Berlin.—According to the *British Medical Journal*, May 16, the Koch Institute is not to be transferred to Dahlem after all. The Prussian government has decided to buy a plot of land close to the ground on which the new fourth Municipal Hospital is to be erected, in the See Strasse, and to build an enlarged and improved Koch Institute upon it. The decision, simple as it seems, has been arrived at only after long and wearisome negotiations. Now it is hoped that this knotty point once solved, the rebuilding and enlargement of the Charité Hospital will be attacked in earnest. The ground at present occupied by the Koch Institute is required for the hospital, but until the future of the Institute itself had been definitely settled, it was impossible to begin work. A new museum for the pathologic collections is urgently needed, as Virchow is terribly cramped in the Pathologic Institute. It is said that 1896 is to see this building begun, but delays have been so frequent in this Charité business that it is best not to prophesy.

One Death in 3,600 Cases.—The New York Institute for the Deaf and Dumb is creditably managed. For the last nine years one death has occurred, and this was from diphtheria contracted outside during vacation. Average number of pupils annually, 400; ages 2½ to 18 years; average age, 8 years. This remarkable record is attributed to the diet of beef and mutton with few foods from the vegetable kingdom, as wheat, potatoes, etc. Obviously this is an institution for health as well as deaf mutes, and its methods are worth copying by those who have persons of like ages in charge. If there are other like cases they should be known. This report reflects great honor on all concerned, specially on Prof. Currier, the principal. Indeed, the Institute is a glory of New York!

Closing Scene in the Kitson-Playfair Litigation.—A compromise has been reached in this case, and an appeal will not be undertaken by Dr. Playfair. On the day when the appeal was to have been moved, it was announced by the counsel for the defendant that the case had been settled on terms which had been agreed upon between the parties, and that therefore the court would not be troubled in the matter. The court assented to this course being taken, and thus the Kitson v. Playfair case reached its termination. No details were divulged respecting the terms of the settlement, and consequently upon this subject the natural curiosity of the public will have to remain unsatisfied. We are, however, in a position to state that the amount of the settlement agreed to was £9,200, to include costs incurred by Mrs. Kitson, and that of this sum £8,000 were to be invested for the benefit of Mrs. Kitson and her children.

King's Daughters' Hospital for Staunton, Va.—An act was passed at the 1895-6 session of the general assembly of Virginia incorporating the "King's Daughters' Hospital of Staunton, Va." It is empowered to maintain, at Staunton, a hospital for the medical and surgical aid, treatment and cure of persons who are sick, deformed or suffering from bodily injuries, and to instruct and train suitable persons in the duties of nurses for the sick. It is further provided that the corporation shall have full power to exclude such forms of disease or sickness as it may be deemed unsafe, improper or impracticable to admit to its hospital. It is also given power to collect fees for medical and surgical treatment and incidental expenses, and to remit the same at its pleasure. The consolations of religion may be extended to the patients in the care of the corporation in whatever forms the patients may desire; but no influence shall be exerted within the hospital in the special interest of any particular sect or denomination.

Serum Treatment of Urinary Infection.—Albarran and Mosny produce a serum to combat urinary infection from the coli bacilli, by alternately vaccinating animals with the products of filtration and then infecting them with virulent cultures. This new alternate method produces a very active serum, while the animal retains his health and strength. An animal will survive a fatal injection of virulent culture if it is inoculated twenty-four hours before with one-twentieth cubic centimeter of this serum. More than this, the guinea pig, which is especially susceptible to urinary infection, will be protected against it, if one drop of the serum is added to a fatal dose of the culture. If two centigrams are injected two hours after a dose of the culture that kills in twelve hours, the animal does not succumb. Albarran and Mosny announced at the meeting of the Académie des Sciences, May 4, that this serum will not only effectually cure urinary infection, but will prevent it.—*Gaz. Méd. de Paris*, May 16.

Medico-Literary Notes.—The New York *Polyclinic* states that Empedocles of Agrigentum, may rank among the fathers of sanitation, inasmuch as he did, as long as 2500 years ago, make public an observation to the effect that the epidemic of puerperal fever had been caused by the influence of escaped sewer gas. *The Scalpel*, although a new claimant for the favor of the reading medical puclic, is really the *Provincial Medical Journal* under a new name. The latter journal departed its life at the end of last year, but the editor decided to raise out of its remains another journal, to which he has given the name of *The Scalpel*. The first number of the venture is before us. It appears in an attractive cover, and its contents are similar to those of its predecessor. The hand book of therapeutics, edited by Professors Penzoldt of Erlangen, and Stintzing of Jena, is making slow progress toward completion. Twenty-five fasciculi have now been issued, yet, owing to the unbusinesslike way in which the parts appear, only the first three volumes are as yet complete, and the conclusion of the third was contained in a fasciculus issued last month. In the prospectus the publisher expressed the hope that the whole work would be issued by the end of 1894, or, at the latest, by the spring of 1895.

John Arden or John of Arden on "Ye Goode Chirurgeon."—A very old code of ethics for surgeons is contained in the following citation that has been hunted up by the editor of the *Medical News*, who says: One of the interesting characters of the fourteenth century, was the sergeant surgeon of Edward III, in 1346, John of Arden. He gives a "Description of ye qualities which ought to be in ye surgeon that performeth any operation in chirurgery: First, that he be devout; secondlie, charitable to ye poor; thirdly, to use few words; fourthly, to avoid drunkenness; fifthly, to be chaste both in words and gesture, as well as to fear ye not; sixthly, not to undertake an incurable disease."

American Degrees Recognized in England.—A decision of the Queen's Bench Division of the High Court of Justice of England, according to a recent cablegram, lays down the dogma that an American practitioner having *bona fide* diplomas is at liberty to pursue his calling unmolested so long as he does not claim to be a registered member of the British Medical Association. The decision, which was rendered by Justices Grantham and Collins, two of the most eminent judges of the High Court, was the finale of proceedings instituted against an American physician named Bridgewater, who was charged with having unlawfully, willfully and falsely represented himself to be a doctor of medicine, contrary to section 40 of the

medical act. It was shown that Dr. Bridgewater, in writing the words "M.D." after his name, invariably added "U. S. A.," and that hanging in his office were diplomas from New York and Philadelphia medical colleges of international reputation. The judgment of the court set forth that having used the letters "U. S. A." after his title there was no intent to defraud, and consequently no cause for prosecution. The Medical Defense Union is further mulcted in the costs of the litigation and the defendant's attorney's and other fees amounting to an aggregate of nearly $4,000.

Quarantine for Convicts.—The 1895-6 general assembly of Virginia passed a law authorizing the governor, upon the application of the superintendent of the penitentiary, when requested in writing so to do by the physician at said institution, to have removed from the penitentiary any felon or prisoner serving a term of imprisonment who has contracted any contagious or infectious disease dangerous to the public health, to some place to be designated by the governor. When any such prisoner is so removed, he is to be safely kept and treated for such disease, and as soon as he recovers his health be returned to the penitentiary, unless his term of imprisonment has expired during his quarantine, in which event he shall be discharged, though not until all danger of his spreading contagion has passed. The judges of the county and corporation courts of the commonwealth are likewise authorized and empowered to have removed from the jails of their respective counties and cities, upon the application of the keeper of the jail, when requested so to do in writing by the physician doing the practice at the jail in question, all felons or prisoners serving terms of imprisonment in such jail and all persons who may be confined therein awaiting trial, who have contracted any contagious or infectious disease dangerous to the public health, to some place designated by the judge of the county or corporation court, where they shall be kept and cared for similarly to the provision made for the penitentiary prisoners.

To Protect the Children.—A law has been passed in Virginia which provides, among other things, that it shall be unlawful for any person, including in this term corporations, partnerships, companies, and associations, employing or having the custody of any child, willfully to cause or permit the life of such child to be endangered, or the health of such child to be injured, or willfully to cause or permit such child to be placed in such a situation that its life or health may be endangered, or to cause or permit such child to be overworked, cruelly beaten, tortured, tormented or mutilated. It is also made unlawful for any person having the care, custody, or control of any child under the age of fourteen years to sell, apprentice, give away, let, or hire out, or otherwise dispose of such child to any person in or for the occupation, service, or purpose of rope or wire walking, begging or peddling, or as a gymnast, contortionist, rider, or acrobat in any place whatsoever, or for any obscene, indecent or immoral purpose, exhibition, or practice whatsoever, or for or in any business, exhibition or vocation injurious to the health or morals or dangerous to the life or limb of such child, or cause, procure, encourage or permit any such child to engage therein.

A Definition of "Natural Labor."—In the *British Medical Journal*, Dr. Robert R. Rentoul, of Liverpool, asserts that no clear notion is given in the laws regulating midwifery practice as to what the term "natural labor" means and includes. He proposes the following definition: "Labor at the ninth calendar month in a woman free from organic and functional disease of the heart, lungs, kidneys, brain, and other internal organs, and from all fever diseases; when there is no impediment in the maternal passage of either soft or hard nature to the passage of the child; when there is only one child in the womb; when the vertex of the child alone presents in either the first or second occipito-anterior position; when labor is completed within twelve hours from the commencement of labor; when a living child is born; when neither instrumental nor manual operations have been required; when the afterbirth comes away without the use of manual operation within twenty minutes after the birth of the child; when there is no laceration of any portion of the parturient structures; and when the mother does not die within thirty-one days after confinement, and when there is no puerperal fever."

Bicycle Racing Not Presumed Injurious.—The case of Keeffe v. National Accident Society of New York, decided by the appellant division of the supreme court of New York, April 14, 1896, was brought to recover on an accident policy of insurance for injuries sustained while riding in a bicycle race. The policy contained a provision that it should not extend to or cover injury resulting from voluntary over exertion, either voluntary or unnecessary exposure to danger, or to obvious risk of injury. The defendant contended that an injury sustained while riding in such a race was within the above exception, and moved for a nonsuit on that ground. The trial court denied the motion, and, on that subject, submitted to the jury the question whether the plaintiff was injured by his voluntarily or unnecessarily exposing himself to danger, or to the obvious risk of injury. This was, the appellate court thinks, a correct disposition of the question raised. It can not be said, as a matter of law, declares the court, that the plaintiff was overexerting himself, nor that he voluntarily exposed himself to danger by entering into the race. Different and equally intelligent and unbiased men might fairly differ in opinion as to whether or not, by taking part in such a race, any risk of injury was necessarily incurred, and therefore the trial judge was right in leaving the decision of that question to the jury.

An American Physician Highly Honored in China.—From the *Medical News* we learn that "Dr. Boudinot Currie Atterbury, medical missionary of the Presbyterian church to China, has been honored by the Emperor of China with the Imperial Order of the Double Dragon, Second Degree, a distinction never before conferred on any foreigner, excepting, perhaps, the ruler of some friendly power. This mark is in recognition of the notable services rendered by the American physician in connection with the work of the Red Cross Society, during the late war. Dr. Atterbury was born in New York City, and comes of a family long prominent in New York. He studied at Yale College, and took his medical course in this city, under the direction of Dr. Frank H. Hamilton. After he was graduated in medicine from Bellevue Hospital Medical College, of the class of 1877, he went to China under the auspices of the Presbyterian Board, and was assigned to missionary duty in the city of Pekin. He there assisted in the establishment of the Ah Ting Hospital. While there, his work was brought to the attention of the emperor and the royal family. He afterward went to Tientsin, where he is at present."

Metals in the Blood.—Kobert has been studying the rôle played by the red blood corpuscles when neutral metals are injected. He finds sixteen metals that combine with the hemoglobin: Zinc, iron, silver, lead, mercury, etc. They form a metal-hemoglobin which must be regarded as a chemic entity. Injections of the bichlorids of different metals into the undissolved corpuscles, either in or outside of the body, lead to the formation of these metal-hemoglobins, but the saturation of the corpuscles in the body is not so great as outside. Acute iron poisoning is therefore to be considered as an "internal choking" resulting from the transformation of the hemoglobin of the blood into this metallic hemoglobin. Death follows intravenous Hg. injections long before the hemoglobin becomes saturated with the metal, but as there is already more or less of this "internal choking" in advanced life, transfusions of human blood should be made in cases of intoxication, or at least transfusions of alkalies, carbonate or bicarbonate of sodium, to realkalize the blood, accompanied by inhalations of pure oxygen.—*Centralblatt f. Chirurgie*, April 11.

Hospital Notes.

The United States Marine Hospital at Chicago, Ill., is to have an addition of an operating amphitheater, with all the latest appliances for aseptic work. The structure will cost $6,970.

Bangor General Hospital, Bangor, Maine. At a meeting of the hospital corporation June 15 it was voted to change the name of the institution to the Eastern Maine General Hospital. The following officers were elected for the ensuing year: President, Charles Hamlin; Vice-President, Edward Stetson; Secretary, Charles H. Bartlett; Treasurer, Charles D. Crosby.

Presbyterian Hospital, New York City.—The management of the Presbyterian Hospital has issued a "Medical and Surgical" report under the editorship of Andrew J. McCosh, M.D., and Walter B. James, M.D. In the preface to Vol. 1, January, 1896, the commendable object of the publication is stated as follows: The management of the Presbyterian Hospital issues this, its first medical and surgical report, believing that a permanent record should be made of the valuable and interesting scientific material that is found in the hospital. The first duty of a hospital is to care for the sick. Its next duty is to advance in every possible way the knowledge of the nature and treatment of disease. It is proposed that this shall be the first of a series of reports to be published annually.

In addition to tabular statements of diseases and injuries treated it contains full reports of unusual and interesting cases. Dr. Francis P. Kennicut reports a case of "General Tubercular Infection, including the Testes, etc., in Child 2½ years old." F. Alden Brown reports two successful cases of amputation at the hip joint. "Tuberculous osteo-arthritis of hip. Amputation at the hip-joint by a new method, through an antero-external incision. T. D., age 27. Female. Preparation for amputation consisted in a brief massage of the leg and thigh while held perpendicularly. At the same time one jaw of a specially made clamp was passed through the existing incision, guided by the finger, under the sartorius and under the femoral vessels close to Poupart's ligament, the other jaw being outside the wound and bearing upon the cutaneous surface overlying the vessels. As the clamp was moderately tightened and the limb lowered, pulsation of the femoral below the clamp could not be felt by the finger in the wound. The handle of clamp rested upon the abdomen, where it lay parallel with the flare of the pelvic brim.

"The application of the clamp to the vessels was a simpler matter than I anticipated. It required but a moment or two to force the finger under the sartorius and under the sheath of the vessels as it lay upon the psoas, and through this short space, along the upper side of the finger, was slipped one blade of the clamp, the tip of which was gloved with rubber tubing, a possibly unnecessary precaution against injury to the vessels.

"It was presumed that the anterior crural nerve would lie just to the outer side of the clamp compression, and in the same fenestrum of the instrument as that surrounding the sartorius. The patient's pelvis was now brought to the end of the table. The left leg was supported by an assistant, while the right thigh was flexed upon the pelvis and secured to the abdomen and table. The existing incision was extended along the outer border of the rectus downward to the bone, and through this deep incision the remaining attachments to the joint and femur were mainly stripped off. A circular skin cuff was cut and turned back. The femoral clamp was tightened one point before severing the muscles with a circular sweep to the bone. Some of the small branches of the sciatic system required the application of pressure forceps, but the femoral vessels and their branches were absolutely dry on the proximal side. It remained only to turn backward the open muscular cuff, raise through it the femur, and sever the posterior part of the capsular ligament, when the head of the bone was turned outward by my assistant and the round ligament cut. The femoral was ligated with silk, all outer vessels with catgut. Gradual loosening of the femoral clamp by stages permitted an excellent opportunity of seizing the bleeding points in regular order of their importance, and the clamp afforded a simple method of quickly starting or closing the blood current in the main channel.

"The rather extensive muscular portions concerned in the abscesses and sinuses had been cut away with scissors before ligation of the vessels. The diseased portion of the acetabulum was curetted and the wound flaps united by interrupted silkworm gut, then more accurately adjusted with a continuous suture of fine black silk. Drainage by iodoform gauze was provided at the uppermost part of the wound, and through the large sinus formerly behind the trochanter. As all preparation had been made to utilize saline venous infusion at some time during the operation, one and a half liters were now thrown into the median cephalic vein by Dr. Hartwell while the wound was being sutured. The beneficial effect of this infusion was at once manifest and the patient left the table with a fuller and slower pulse than she had had since admission to the hospital."

Practical Notes.

The Topic Action of Salacetol.—Ricchetti announced in 1894 that salacetol has the advantage over other combinations of salicylic acid, that it is a fine antiseptic for the intestinal canal without occasioning any toxic effects, even when taken into the stomach in large doses. Also that it has no effect on the soluble ferments, while it retards and arrests the figured ferments, and that it prevents the development of the cholera and typhoid micro-organisms and also of the coli bacillus. Mosso of Genoa has been recently studying its effect in local applications, with equally favorable results. He finds that applied externally, the temperature of the body and a slightly alkalin liquid, favor its separation into its two components, salicylic acid and acetol, and it produces immediately its antiseptic effect without irritating the tissues. The same amount by weight contains more salicylic acid than salol. It does not require, like salol, several hours to produce its effect; and the products of its separation into its elements are not toxic. Mosso experimented with it in the form of a powder, a salve (20 grams salacetol to 100 grams ung. sim. or vaselin). And in liquid form (4 grams salacetol in 50 grams water and glycerin). —*Gazzetta degli Ospedali e delle Cliniche*, April 14.

Injections of Hot Water in the Treatment of Chronic Diarrhea.—Pollatschek of Carlsbad has found that small, repeated injections of hot water are very beneficial in the treatment of chronic diarrhea. He uses only enough water at 104 to 109 degrees as will be retained and absorbed by the intestines, beginning with 100 grams. The effect is similar to that produced in vaginal and uterine troubles, relieving the congestion and calming the nerves of that region. The hot water also stimulates the peripheral centers that control the peristaltic movements of the bowels, and chronic diarrhea is often permanently cured by this method. Helles, of Lyons, has also recently published a paper on this subject. He recommends the decubitus dorsal position to retain the injection, and uses much hotter water, from 113 to 130 degrees.—*Semaine Médicale*, May 13, and *Journ. de Méd. et de Chir.*, May 25.

Influence of Hot and Cold Baths on the Chemic Changes of the Blood and Urine.—Strasser announces that cold baths seem to increase the amount of alkali in the blood and diminish the amount of acidity in the urine. Hot baths, on the other hand, seem to increase the amount of acid in the urine, while diminishing the amount of alkali in the blood. This result is the more surprising as both hot and cold baths increase the amount of chemic changes. He explains it by the fact that hot baths produce rather an organic dissociation than an oxidation, while cold baths produce the opposite effect. Kapper has shown that the urine becoming alkalin with a vegetable diet will become acid under the influence of cold baths. Strasser ascribes the alkalinity of the urine to the excess of alkalin carbonates, and as cold baths increase the elimination of carbonic acid through the lungs and the skin, the urine thus ceases to be alkalin.—*Le Semaine Médicale*, May 13.

Diffuse Multiple Neuritis in Secondary Stage of Syphilis.—The patient was a young butcher with pronounced chancres and eruptions; eyebrows, mustache and beard dropping out, complete atrophy of many of the muscles and partial paralysis, with absolute inability to walk or move the extremities. Feet turned in like a paralytic. No pain was felt spontaneously, but pressure on the calf was very painful. There was no

sensibility to a prick or touch on the foot or right limb, while it remained normal to heat. The vesical and rectal sphincters were normal in their action. This last fact and the marked predominance of the paralysis in the extremities, with the differences in sensibility, all spoke against myelitis. The symptoms were those of Leyden's peripheral multiple neuritis, motor form, and its etiology was determined by the presence of the syphilitic symptoms. The treatment was a weekly injection for three months of thymol, and acetate of mercury, and the patient was restored to comparative health. Essential lesions of the peripheral nervous system, due to syphilis, are quite rare. In most cases they are limited to certain localities, sciatic, facial, &c. There are only two descriptions on record that coincide with this case, and they were attributed to myelitis.—*Annales de Derm. et de Syph.*, April.

Oxygen Antidotal to the Sequelae of Etherization.—The *American Therapist*, May, quotes Dr. Theophilus Parvin as being a convert to the views of Professor Landau, of Berlin, as to the use of oxygen after ether anesthesia. Dr. Parvin further observes that Landau is one of the few Berlin operators who prefers ether to chloroform as an anesthetic; and he has found by a very large experience, that as soon as the operation is ended, if the patient immediately inhales oxygen freely for a few minutes, she does not subsequently suffer from headache or nausea and vomiting. The immediate effects of inhaling oxygen are: The dusky hue of the face disappears, and the pulse becomes fuller and slower; there is, too, a more rapid recovery of consciousness. He had many opportunities of witnessing these results at Dr. Landau's hospital. The day subsequent to operations, Dr. Parvin several times visited these patients, at the doctor's request, asking them as to the freedom from vomiting and pain, and the invariable reply was that they had neither. The *Medical and Surgical Reporter* is the source of the *Therapist's* quotation.

Migraine.—The legion of proposed remedies for the cure of migraine, indicate the difficulty of hitting upon a rational treatment. Seguin advises as a prophylactic treatment, Indian hemp at the dose of one-fifth grain given three times a day in pills, associated with iron and arsenic; it should be continued for some time. The best treatment for the attack, when depending on nervous causes, is cafein and antipyrin, cafein 2 grains, antipyrin 10 grains, to be renewed in an hour if necessary. Salicylate of soda at the dose of ½ dram is almost a specific where the headache is derived from a gouty or rheumatic diathesis. Bromid of potassium was believed by Charcot to be the remedy, *par excellence*, of the ophthalmic form. A writer in the *Press and Circular* closes up an article on this subject with the following hint: Many medical men prescribe with success exalgin as follows:

R	Exalgin	06
	Rum	30
	Syrup	30
	Water	120

Misce. A tablespoonful three times a day.

Tannalbin.—This name has been given by Gottlieb in an article in the *Deutsche Medicinische Wochenschrift* to an albuminate of tannin rendered insoluble in the gastric juices by being heated for five or six hours at a temperature of between 100 and 120 degrees C., and yet slowly soluble in the alkalin intestinal secretions. The preparation appears as a pale yellow powder, quite tasteless, and containing about 50 per cent. of tannic acid. Its clinical utility has been tested by Engel, who employed it in forty cases of various forms of intestinal disturbance, catarrhal and diarrheal conditions, and found it to be an efficient intestinal astringent, possessing the usefulness of a tannic acid preparation without any ulterior influence upon the functions of the stomach. The drug was administered in powder form to adults in doses of 7½ grains, three or four times a day, and preferably at intervals of an hour or two.

Value of Silver as an Antiseptic.—It may be some consolation to the silver men to learn that science has recently found an important use for silver, as announced at the Berlin "Chirurgencongress" by Crede, of Dresden. If a plate of metal is placed on a culture of staphylococcus aureus, a sterile zone soon forms around it, while the metal itself is affected by the secretions of the microbes, which produce lactic acid, forming a lactate of the metal. Thallium is the most powerful in this respect, and silver next, but as the lactates of thallium and of silver are very poisonous, Crede experimented chiefly with the carbonate of silver, impregnating with it silks, catgut and drains, and using it on gauze in a fine powder or in leaf sheets. It proved exceedingly effective as an antiseptic for wounds where a prolonged action was desired, while never causing pain nor irritating the tissues. He found it still antiseptic even after remaining on a wound eight days. He has also administered it hypodermically in five cases of acute infection, such as erysipelas, with success and no unpleasant results. In one case the solution contained one gram of lactate of silver. He speaks from seven months' experience.—*Semaine Médicale*, June 3.

Lithiasis of the Gall Bladder.—The last five meetings of the Paris Société de Chirurgie have been devoted to this subject, and have brought out descriptions of 42 new cases. We note in the reports published in the Paris medical journals for May, that one point to remember in differentiating lithiasis of the gall bladder from a wandering kidney, is that when pressed with the finger it stays, while the latter slips away from under the finger. The most difficult diagnosis of all is when these two are combined, or when the gall bladder is forced so low down by the enlarged liver that it is mistaken for an appendicitis. Tuffier described one case operated upon which proved to be an old extra-uterine pregnancy, the more remarkable as the patient had recently passed through a normal child birth. In Routier's eight cases hepatic colic was present, but this was not the case with most of the rest. In regard to the operation, that known as "Ideal Cholecystostomy" was generally denounced, although two very successful cases were reported, with removal of 233 gallstones in one. Tuffier prefers cholecystectomy when it is easily performed, when the reservoir is not infected and the bile duct is permeable. In short, he extirpates in good cases, and performs cholecystostomy in bad cases, which seemed to be the general practice. Schwarz insists upon the importance of a double ligature of the pedicule and the use of the thermo-cautery. In some cases a correct diagnosis was impossible at first, until the affection had progressed further. The fistula left afterward often seems to benefit the general health, and can be closed later at any time, and often heals of itself. When the pedicule can stand ligating, draining is not necessary. In removing the gall bladder, it is easy to avoid injury to the parenchyma of the liver, by cutting it away with small snips of the scissors in the fibrous tissue enclosing the bladder, rather than in the tissue of the liver. It does not bleed, and leaves a bed of fibrous tissue under the liver which can be closed up by fastening together the two lips of fibrous tissue adhering to the liver.

Louisville.

HOSPITAL COLLEGE OF MEDICINE AND DENTISTRY.—The joint commencement of these institutions was held at the same place on the 18th inst., the graduating classes wearing caps and gowns. There were thirty-one graduates of the dental department and forty-nine of the medical. Addresses were made on behalf of the faculties by Prof. P. Richard Taylor, Dr. Peaybody, Dr. Jno. A. Larrabee, President of the College, and Col. Bennett H. Young on behalf of the Board of Censors.

ALUMNI.—The annual meeting of the Alumni of the Hospital College of Medicine was held in this city on the 18th inst. about 100 members being present. Dr. E. C. Underwood is president, Dr. T. E. Converse, vice-president and Dr. Philip F. Barbour, secretary.

MEDICO-CHIRURGICAL SOCIETY.—Dr. S. G. Dabney was recently elected president of this society and Dr. Thos. Hunt

Stucky was made secretary. The society was the guest of Dr. Lewis S. McMurtry at the Kenton Club on the 19th, the title of the essayist's paper being "The Development of the Modern Aseptic Surgical Technique."

Health Officer's Report.—For the past week there have been sixty-one deaths and six stillbirths. Consumption caused eleven, and only two of the deaths occurred at the City Hospital.

Pharmacists.—The State Pharmaceutical Society held its annual session at Estill Springs, and the following officers were elected for the coming year: President, J. M. McFarland, Henderson; vice-president, J. C. Hearn; secretary, J. W. Gayle, Frankfort; treasurer, C. S. Morris, Louisville.

Washington.

Weekly Report of the Health Officer.—The report of the Health Department for the week ended June 13, is as follows: Number of deaths (stillbirths not included) 91; death rate per 1,000 per annum 17.2; death rate per 1,000 per annum corresponding week last year 13.7. There were 38 deaths of children under 5 years of age, of which 8 were of a diarrheal nature.

Medical Society.—At the meeting of the Society held on the 3d inst., Dr. Belt reported cases of sponge grafting in socket for artificial eyes and presented patient showing results. On the 10th inst. Dr. Kerr reported two cases of the rupture of the bladder.

Washington Obstetrical and Gynecological Society.—At the meeting held on the 5th inst, Dr. E. L. Tompkins read a comprehensive paper on chorea. A full discussion followed. At the meeting held on the 19th inst., Dr. Fry read a paper entitled "Manual Rectification of Faulty Head Presentations." The next meeting will take place in October for the election of officers and presidential address.

Artesian Wells for the District.—The District appropriation bill contains an item of $4,000 for the construction of fifteen wells which will consist of a six-inch casing driven to a depth of about three hundred and fifty feet through the solid rock formation. The driving of these wells will mark the beginning of a new drinking water supply for Washington, for as soon as they are established all of the shallow wells will be done away with.

Board of Medical Examiners Appointed.—The Commissioners under the recent law have appointed the following physicians to constitute the Board of Medical Examiners for the District of Columbia: For the regular school, Drs. C. H. A. Kleinschmidt, G. Wythe Cook, J. S. McLain, G. C. Ober and C. B. Purvis (colored). For the homeopathic school Drs. J. B. G. Custiss, S. S. Stearns, W. R. King, Z. B. Babbitt and T. L. McDonald. For the eclectic school, Drs. Robinson, Geddis, Julihn, Heiser and one yet to be named.

Philadelphia.

University of Pennsylvania.—Last week was commencement week at the University of Pennsylvania. The exercises of the 140th annual commencement marked the 156th year of the university's existence. The standard of scholarship has been raised in all the departments this year, and serious complaint was made, especially by members of the Dental class of the severity of the examinations. The standard of the entrance examinations will also be higher in future and, at each session, will be gradually raised until the fall of 1899, when it is expected that a degree in arts, or its equivalent, will be required of every matriculant in the medical department. It is to be remarked that this department is becoming more closely connected with the other departments of the University than it was formerly, an illustration being furnished by the fact that the salaries of the members of the medical faculty are fixed and are independent of the income received from medical students and unaffected by the size of the class. A pleasant feature of the commencement week was what was called "Alumni Day," when there was a general meeting of the alumni of all departments and the annual meeting of the general Alumni Society. The latter was held at noon, June 10, at Houston Hall and was followed by a lunch in the library. A reception was tendered to the provost, Dr. Harrison, in the afternoon and banquets by the alumni of the medical and dental departments were held in the evening. The commencement or the medical department was held June 11 at noon, as usual at the Academy of Music, the degrees being conferred upon eighty-eight candidates.

A New Dean at the Medico-Chirurgical College.—Dr. Isaac Ott has been elected Dean of the Medico-Chirurgical College as the successor of Dr. Laplace, who resigned in order to devote his whole time to the duties of the chair of surgery. Dr. Ott is also professor of physiology in the Medico-Chirurgical, a position which during the last two sessions he has filled very acceptably to the students, among whom he is very popular. He has recently been elected consulting neurologist to the State Hospital for the Insane at Norristown.

Philadelphia Hospital.—The results of the examinations for the positions of resident physician at the Philadelphia Hospital have been made public. The examining board consisted of Drs. H. C. Chapman, J. M. Anders and Judson A. Daland. There were sixteen vacancies, which were filled by the Board of Charities in accordance with the recommendation of the examining board, by the election of six University men, five Jefferson men and five from the Medico-Chirurgical.

Fresh Air Charity for Children.—One of the most useful of the medical charities of the city is the Sanitarium at Red Bank, on the Delaware River several miles below the city, which opened on June 4 for its eighteenth season. During the seventeen years, of which careful records have been kept, 1,409,402 persons, mostly children, have been carried to and from the sanitarium and without a single serious accident. Last year the total number of admissions were 174,481. The association owns two commodious steamboats and an enclosed park of over eighty acres, with administration buildings, temporary hospital and other appropriate structures, the latest of which is the Simon Muhr Memorial Building, which has just been opened and which will be devoted to the preparation of diet. The sanitarium is especially designed to afford opportunity to poor children during the hot weather to escape from the streets and alleys of the city and enjoy a trip on the river and a day at the grounds where an abundant supply of milk, soup and sandwiches are provided, with tea and coffee for the caretakers. Tickets are distributed among physicians, who give them to those deemed worthy. Especial care is taken that children suffering with contagious diseases shall not be taken.

Smallpox and Vaccination in the Public Schools.—The Board of Health of the city has made the rule absolute that no child shall be permitted to enter the public schools without having been vaccinated, or protected by a previous attack of smallpox. They have further notified all private schools and also the Sunday schools that they must comply with this rule and refuse to receive any pupil who is not provided with a certificate of vaccination. The latter requirement has been pronounced impracticable, although many of the persons most concerned by it entirely approve of it in principle.

The American Neurological Association Meeting.—The twenty-third annual meeting of the American Neurological Association assembled June 3 at the College of Physicians and during this and two following days held very profitable meetings under the direction of Dr. F. X. Dercum, president; Drs. C. E. Riggs of St. Paul, and G. J. Preston of Baltimore, vice-presidents, and Dr. G. M. Hammond of New York, secretary and treasurer. The next session will be held at Washington, with the Congress of American Physicians. Dr. M. A. Starr

of New York was elected president; Drs. H. R. Stedman of Boston and H. S. Upson of Cleveland, vice-presidents, and Dr. Hammond was reëlected secretary. Receptions were given by the Philadelphia Neurological Society at the Philadelphia Medical Club which were largely attended.

THE COUNTY MEDICAL SOCIETY.—At the meeting of the Philadelphia County Medical Society, held on the 11th inst., Dr. Ernest Laplace read a paper on the "Surgical Treatment of Insanity," in which he reported four cases of acute insanity with delusions, which had come under his notice. They all suffered with headache and had histories of injuries to the head, although there was no evidence of injury sufficiently severe to produce fracture having been inflicted. In each of these four cases he had used the trephine and in three had made a linear craniectomy along the coronal suture, or in front of it, to the extent of some three inches, and had introduced a flat instrument to separate the dura mater from the skull over both cerebral hemispheres as far back as he could go. In the last case, that of a man of 26 years of age, who for eleven months had had melancholia and delusions of persecution, and who was steadily getting worse, Dr. Laplace operated as above stated, and noted the fact that there was considerable hemorrhage during the operation. As soon as the operation was over, the patient was found to be absolutely sane and free from all delusions and even without remembrance of those which had annoyed him for months. He had remained perfectly well since and was presented at the meeting although the operation had only been performed May 29. There was a recent scar several inches in length on the vertex, wound having entirely healed. The patient had no more headache and was cheerful and apparently perfectly well. Dr. Laplace said that the free hemorrhage in this case might have brought about the result, but he gave most of the credit to the relief of pressure by the operation. It was certainly remarkable that these were the only cases of insanity that he had been called upon to treat and that in each case such good results should be obtained by opening the skull. At the same meeting, Dr. R. Meade Bolton, Superintendent of the Bacteriological Laboratory of the City Board of Health, reported the results of the examination of cultures from cases of suspected diphtheria from May 30, 1895, to June 1, 1896. The total number of examinations were 3,363, of which 1,421 were of primary cases and 1,942 secondary. A diagnosis was given of diphtheria in 557 cases and it was confirmed by the attending physician in 507 cases, or in 90.2 per cent. The diagnosis of not diphtheria was given in 148 cases and confirmed in 108. The total number in which the diagnoses was given by the department was 705 and it was confirmed in 615 cases, or in 86.4 per cent. This was regarded as a very satisfactory result for the first year's work of the new department, which under Dr. Bolton's able management is working harmoniously with the other departments and the profession. Dr. Edward Jackson read a paper on "The Profession, the Optician and the Public," in which he defended the view that the examination of the eye and the measurement of refraction can only be done properly by those who have a medical training and special experience. The optician represents the pharmacist and should confine himself to filling the prescriptions and should not assume the responsibilities of the ophthalmologic physician. A report of a case of varicella gangrenosa was read by Dr. J. P. Crozer Griffith, who also exhibited photographs of the case, which terminated fatally.

COLLEGE OF PHYCISIANS.—At the June meeting of the College of Physicians, Dr. Joseph Leidy read a "Note on Infantile Scurvy" and reported several cases. The symptoms were liable to be mistaken for rheumatism. He believed that sterilized milk was a potent cause of this form of nutritive disorder which is generally promptly ameliorated by an improved diet. Dr. Oscar H. Allis read a paper entitled: "The Mechanism of the Dislocation of the Shoulder and Hip Deduced from Their Accidental Restorations," and presented specimens. The following were elected to Associate Fellowship at this meeting: Sir George Murray Humphry, Bart., Cambridge, England; Professor Jaccoud, Paris, France; Dr. George M. Sternberg, U. S. A., Washington, D. C.; Dr. Phineas Sanborn Conner, Cincinnati, Ohio; Dr. L. McLane Tiffany, Baltimore, Md.; Dr. William T. Lusk, New York.

THE PUBLIC SERVICES

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from June 13 to June 19, 1896.

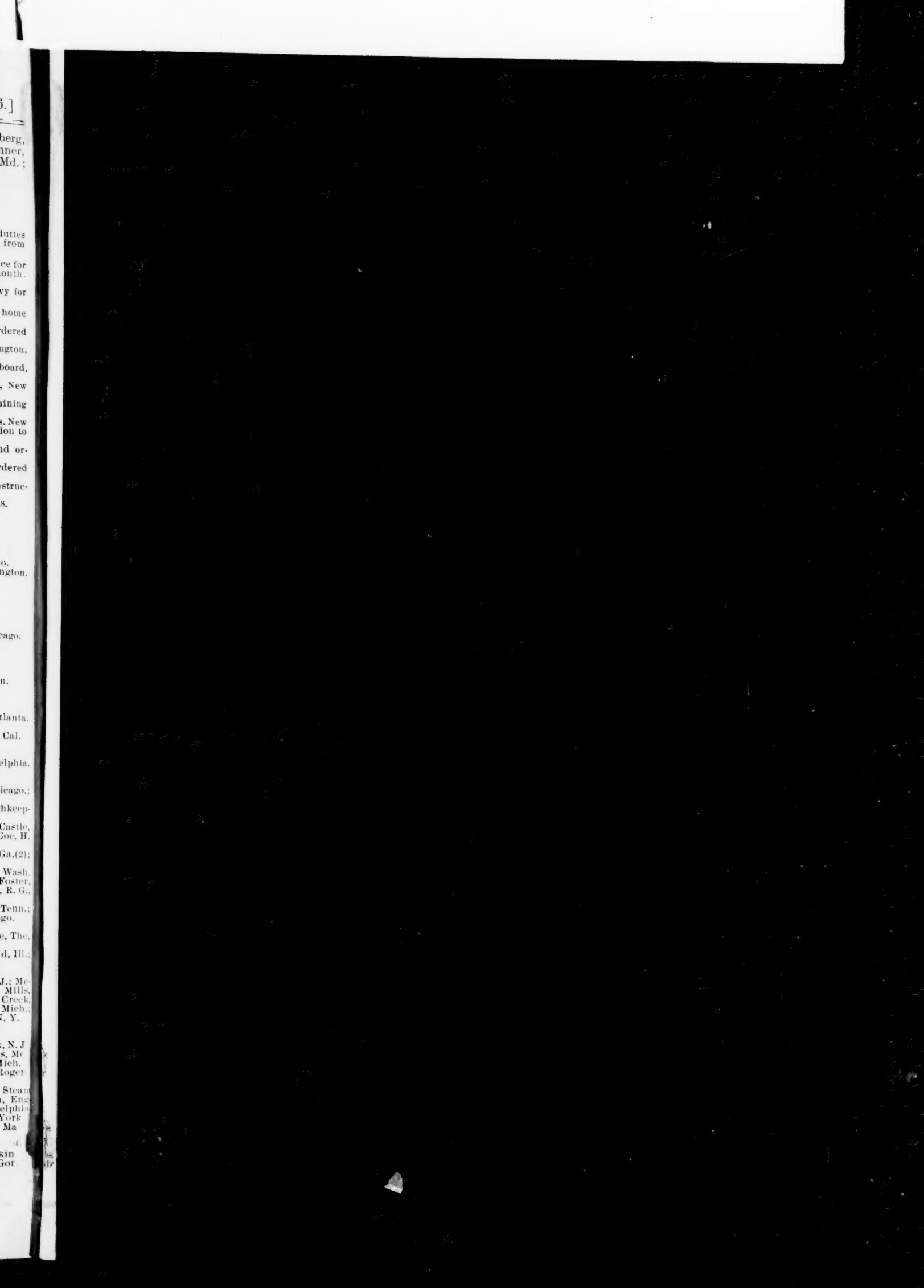
Capt. W. Fitzhugh Carter, Asst. Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending June 20, 1896.

Surgeon R. Whiting, detached from the "Monterey," ordered home and granted three months' leave.
Surgeon C. T. Hibbett, detached from the "Bennington" and ordered to the "Independence."
Surgeon H. T. Percy, detached from board of examiners, Washington, D. C., July 1, and ordered to the "Monterey."
Surgeon W. A. McClurg, ordered as member of medical examining board, Washington, D. C.
P. A. Surgeon J. W. Baker, detached from board of examiners, New York, June 22, and ordered to the "Bennington."
P. A. Surgeon C. F. Stokes, ordered as recorder of medical examining board, New York, June 22.
Surgeon A. C. Russell, detached from board of medical examiners, New York, July 5, and granted leave until August 7, with permission to go abroad.
Asst. Surgeon M. K. Johnson, detached from the "Franklin" and ordered to the "New York."
Asst. Surgeon F. C. Cook, detached from the "New York" and ordered to treatment at naval hospital, New York.
Asst. Surgeons W. N. Wheeler and R. S. Blakeman, ordered to instruction at naval laboratory, New York.
P. A. Surgeon J. W. Baker, ordered to delay reporting until July 18.

Change of Address.

Bell, G. Franklin, from Williamsport to Newberry, Pa.
Burroughs, Sam. R., from Raymond to Buffalo, Texas.
Bonner, C. A., from 33 S. High St. to 28 S. Perry St., Dayton, Ohio.
Bulkley, J. W., from 805 12th St. N.W. to 1723 N St. N.W., Washington.
Bassett, L. A., from Chicago to Jefferson, Iowa.
Corley, H. N., from St. Louis to St. Paul, Mo.
Dobson, S. J., from Jefferson to Edna, Kan.
Durant, G., from New York, N. Y., to Branford, Conn.
DeHart, J. N., from Brooklyn to Round Lake, N. Y.
Edmondson, Geo. J., from Chicago to Moroa, Ill.
Fortier, J. J., from 123 Blue Island Ave. to 318 New Era Bldg., Chicago.
Givens, Jno. W., from Baltimore, Md., to Los Angeles, Cal.
Hobday, W. A., from Biwabik to Halsted, Minn.
Jordan, J. D., from Chicago to Madisonville, Texas.
Ketcham, L. Y., from San Diego to Escondido, Cal.
Kimball, H. H., from Medical to Dayton Blk., Minneapolis, Minn.
Maxey, S. B., from St. Louis, Mo., to Sherman, Texas.
Marr, W. L., from 61 N. State St. to 5451 Lake Ave., Chicago.
Mulholland, J. F., from Jordan, Minn., to Manitowoc, Wis.
Paine, H. M., from West Newton, Mass., to 67 N. Forsyth St. Atlanta, Ga.
Quigley, J. M., from Portland, Ore., to 44 6th St., San Francisco, Cal.
Rubuck, S. H. from Chicago to Lyle, Minn.
Star, J. W., from Liberty Center to Lacona, Iowa.
Yemans, H. W., from New York, N.Y., to 307 Walnut St., Philadelphia.

LETTERS RECEIVED

Albright, J., Grand Rapids, Mich.; Abbott Alkaloidal Co., Chicago.; Armitage, J. E., National Home, Wis.
Boehringer, C. F., & Soehne, New York, N.Y.; Bates, X. T., Poughkeepsie, N.Y.; Bishop, W. T., Derry Station, Pa.
Close & Cone, Chicago; Chamber, J. H. & Co., St. Louis, Mo.; Castle, Wilmot & Co., Rochester, N. Y.; Cordell, E. F., Baltimore, Md.; Coe, H. W., Portland, Ore.; Connor, Leartus, Detroit, Mich.
Davidson Rubber Co., Boston, Mass.; Daniel, John B., Atlanta, Ga.(2); Dolliver-Goodale Co., Boston, Mass. (2);
Ensminger, S. L., Crawfordsville, Ind.; Eagleson, J. B., Seattle, Wash.
Foote, A. E., Philadelphia, Pa.; Frost Co., Geo., Boston, Mass.; Foster, Eugene, Augusta, Ga.; Fyke, E. E., Centralia, Ill.; Ferguson, R. G., Duluth, Minn.
Gardner, R. W., New York, N.Y.; Gallion, E. M., Harriman, Tenn.; Gorsuch, John C., Washingtonville, Ohio; Gould, Frank J., Chicago.
Hall, W. W., Springfield, Ohio
Jones, S. N., Louisville, Ky.; Journal of Experimental Medicine, The, Baltimore, Md.
Kindred, Jos. J., Stamford, Conn.; Kreider, G. N., Springfield, Ill.; Krause, W. C., Buffalo, N.Y.
Lord & Thomas, Chicago (3); Lehn & Fink, New York, N.Y. (2);
Merz Capsule Co., Detroit, Mich.; Merrick, M. B., Passaic, N. J.; McMurtry, L. S., Louisville, Ky.; Maltine Mfg. Co., New York, N.Y.; Mills, H. B., Philadelphia, Pa.; Modern Medicine Publishing Co., Battle Creek, Mich.; McCassy, J. H., Dayton, Ohio; Maclean, Donald, Detroit, Mich.; McCutchon, P. B., New Orleans, La.; McDonald, W. G., Albany, N. Y.
Newton, R. C., Montclair, N. J.
Ott, Isaac, Philadelphia, Pa.; Oakley, J. H., San Francisco, Cal.
Potts, C. S., Philadelphia, Pa.; Prudential Insurance Co., Newark, N. J.
Prentiss, Spencer B., Washington, D. C.; Paquin, Paul, St. Louis, Mo.; Prewitt, T. F., St. Louis, Mo.; Peterson, Reuben, Grand Rapids, Mich.
Reed, R. Harvey, Columbus, Ohio; Russell, F. C., Joliet, Ill.; Roger G. A., New York, N.Y.; Ray, J. M., Louisville, Ky.
Starkey, H. M., Chicago (2); Seymour, F. E., Fort Dodge, Iowa; Steam Gauge and Lantern Co., Syracuse, N.Y.; Stevens, B. F., London, England; Schering & Glatz, New York, N.Y.; Sherer, J. W., Philadelphia, Pa.; Souchon, Edmond, New Orleans, La.; Schieffelin & Co., New York
Tasche, J. C., Sheboygan, Wis. (2); Tyer Rubber Co., Andover, Ma
Thomas, John D., Washington, D. C.
Veiga de Americo, Rio de Janeiro, Brazil.
Watts, R. F., Millersburg, Iowa; Wing, Elbert, Chicago; Wilkin Co., The Chicago; Winslow, Chas. E., Los Angeles, Cal.; Walker-Gor Laboratory Co., The, Chicago.